**Descriptions of barley genetic stocks**

**Tables 2 and 3 (2015).**

**Jerome D. Franckowiak1 and Udda Lundqvist2**

**1 Department of Agronomy and Plant Genetics**

**University of Minnesota Twin Cities**

**411 Borlaug Hall, 1991 Upper Buford Circle**

**St Paul, MN 55108, USA**

**2Nordic Genetic Resource Center (NordGen)**

**Smedjevägen 3, SE-230 53 Alnarp, Sweden**

**e-mail:** [**jfrancko@umn.**](https://mail.google.com/mail/u/0/h/1cwi900iuetc5/?&cs=wh&v=b&to=jfrancko@umn.edu)**edu**

[**udda.lundqvist@nordgen.org**](mailto:udda.lundqvist@nordgen.org)

In this section of the Barley Genetics Newsletter, you will find two updated tables with new and revised barley locus descriptions. The descriptions are listed by BGS numbers (Table 2) and by alphabetic order using the existing and recommended locus symbols (Table 3). As research in barley is proceeding rapidly, it is necessary to update the latest research and findings about specific barley genes.

**Table 2. A listing of Barley Genetic Stock (BGS) descriptions in recent issues of the Barley Genetics Newsletter with chromosome location information, recommended locus symbols, locus names, and stock location information.**

**Table 3. An alphabetic listing of recently published Barley Genetic Stock (BGS) descriptions for loci in barley (*Hordeum vulgare*), including information on chromosomal locations, recommended locus names, and original cultivars.**

**Table 2.** A listing of Barley Genetic Stock (BGS) descriptions in recent issues of the Barley Genetics Newsletter with recommended locus symbols, chromosome location information, locus names, description citation, and the accession number for the genetic stock.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 1 | brh1 | br, ari-i | | 7HS | | Brachytic 1 | 43: 48 | 25 |
| 2 | fch12 | fc, clo-fc | | 7HS | | Chlorina seedling 12 | 41: 60 | 36 |
| 3 | yvs2 | yc | | 7HS | | Virescent seedling 2 | 26: 46 | 41 |
| 4 | abo8 | ac2, alb-m | | 7HS | | Albino seedling 8 | 26: 47 | 61 |
| 5 | fch8 | f8 | | 7HS | | Chlorina seedling 8 | 41: 62 | 40 |
| 6 | vrs1 | v, Int-d | | 2HL | | Six-rowed spike 1 | 37:192 | 196 |
| 7 | nud1 | n, h | | 7HL | | Naked caryopsis 1 | 44: 51 | 115 |
| 9 | dsp1 | l | | 7HS | | Dense spike 1 | 43: 50 | 1232 |
| 10 | lks2 | lk2, lk4 | | 7HL | | Short awn 2 | 45: 80 | 566 |
| 11 | ubs4 | lks2, ari-d | | 7HL | | Unbranched style 4 | 45: 84 | 567 |
| 12 | des1 | lc | | 7H | | Desynapsis 1 | 42: 58 | 592 |
| 13 | des4 | des4 | | 7H | | Desynapsis 4 | 44: 54 | 595 |
| 14 | des5 | des5 | | 7HL | | Desynapsis 5 | 44: 56 | 596 |
| 15 | blx1 | bl | | 4HL | | Non-blue aleurone xenia 1 | 26: 60 | 185 |
| 16 | wax1 | wx, glx | | 7HS | | Waxy endosperm 1 | 42: 65 | 908 |
| 17 | fch4 | f4, yv | | 7HL | | Chlorina seedling 4 | 43: 54 | 1214 |
| 18 | fch5 | f5, yv2 | | 7HS | | Chlorina seedling 5 | 43: 56 | 1215 |
| 19 | blx2 | bl2 | | 7HS | | Non-blue aleurone xenia 2 | 26: 65 | 209 |
| 20 | Rym2 | Ym2 | | 7HL | | Reaction to BaYMV 2 | 26: 66 | 984 |
| 21 | Run1 | Un | | 7HS | | Reaction to *Ustilago nuda* 1 | 26: 67 | 1324 |
| 22 | Rsg1 | Grb | | 7H | | Reaction to *Schizaphis graminum* 1 | 37:199 | 1317 |
| 23 | wnd1 | wnd | | 4HL | | Winding dwarf 1 | 42: 74 | 2499 |
| 24 | fst3 | fs3 | | 7HS | | Fragile stem 3 | 41: 74 | 1746 |
| 25 | Xnt1 | Xa | | 7HL | | Xantha seedling 1 | 26: 71 | 1606 |
| 26 | snb1 | sb | | 7HS | | Subnodal bract 1 | 26: 72 | 1217 |
| 27 | lbi3 | lb3 | | 7HL | | Long basal rachis internode 3 | 42: 79 | 536 |
| 28 | ert-a | ert-a | | 7HS | | Erectoides-a | 41: 76 | 468 |
| 29 | ert-d | ert-d | | 7HS | | Erectoides-d | 42: 82 | 475 |
| 30 | ert-m | ert-m | | 7HS | | Erectoides-m | 44: 57 | 487 |
| 31 | sex6 | ssIIa | | 7HS | | Shrunken endosperm xenia 6 | 45: 86 | 2476 |
| 32 | Rph9 | Pa9 | | 5HL | | Reaction to *Puccinia hordei* 9 | 37:201 | 1601 |
| 33 | ant1 | rs, rub-a | | 7HS | | Anthocyanin-less 1 | 42: 89 | 1620 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 34 | msg50 | msg,,hm | | 7HL | | Male sterile genetic 50 | 45: 88 | 2404 |
| 35 | rsm1 | sm | | 7HS | | Reaction to BSMV 1 | 26: 84 | 2492 |
| 36 | xnt4 | xc2 | | 7HL | | Xantha seedling 4 | 26: 85 | 42 |
| 37 | xnt9 | xan,,i | | 7HL | | Xantha seedling 9 | 26: 86 | 584 |
| 38 | smn1 | smn | | 3H/5H | | Seminudoides 1 | 43: 58 | 1602 |
| 39 | mss2 | mss2 | | 7HS | | Midseason stripe 2 | 44: 59 | 2409 |
| 40 | prm1 | prm | | 7HS | | Premature ripe 1 | 44: 60 | 2429 |
| 41 | brh7 | brh.w | | 7H | | Brachytic 7 | 42: 98 | 1687 |
| 42 | Pyr1 | Pyr.g,Pyr.i | | 3HL | | Pyramidatum 1 | 41: 78 | 1581 |
| 43 | mov1 | mo5 | | 7HL | | Multiovary 1 | 43: 59 | 3641 |
| 44 | brh16 | brh.v,ari-o | | 7HL | | Brachytic 16 | 45: 89 | 1686 |
| 45 | sdw4 |  | | 7HL | | Semidwarf 4 | 41: 80 |  |
| 48 | Rpt4 | QRpt7 | | 7HL | | Reaction to *Pyrenophora teres* 4 | 43: 61 |  |
| 49 | sld8 | sld.i | | 7HS/ 4HL | | Slender dwarf 8 | 43: 63 | 2484 |
| 51 | rtt1 | rt | | 2HS | | Rattail spike 1 | 26: 87 | 216 |
| 52 | fch15 | or | | 2HS | | Chlorina seedling 15 | 40: 48 | 49 |
| 53 | abo2 | a2 | | 2HS | | Albino seedling 2 | 26: 89 | 70 |
| 55 | fch1 | f, lg | | 2HS | | Chlorina seedling 1 | 40: 49 | 112 |
| 56 | wst4 | wst4 | | 2HL | | White streak 4 | 44: 61 | 568 |
| 57 | eog1 | e, lep-e | | 2HL | | Elongated outer glume 1 | 43: 64 | 29 |
| 58 | vrs1 | lr, vlr | | 2HL | | Six-rowed spike 1 | 26: 94 | 153 |
| 59 | gpa1 | gp, gp2 | | 2HL | | Grandpa 1 | 45: 91 | 1379 |
| 60 | lig1 | li, aur-a | | 2HL | | Liguleless 1 | 45: 93 | 6 |
| 61 | trp1 | tr | | 4HL | | Triple awned lemma 1 | 41: 82 | 210 |
| 62 | sbk1 | sk, cal-a | | 2HS | | Subjacent hood 1 | 40: 51 | 267 |
| 63 | yvs1 | yx, alb-c.7 | | 2HS | | Virescent seedling 1 | 26: 99 | 68 |
| 64 | des7 | des7 | | 3H | | Desynapsis 7 | 43: 67 | 598 |
| 65 | Eam1 | Ppd-H1, Ea | | 2HS | | Early maturity 1 | 44: 64 | 1316 |
| 66 | vrs1 | Vd | | 2HL | | Two-rowed spike 1 | 26:103 | 346 |
| 67 | vrs1 | Vt | | 2HL | | Deficiens 1 | 26:104 | 684 |
| 68 | Pvc 1 | Pc | | 2HL | | Purple veined lemma 1 | 44: 67 | 132 |
| 69 | Gth 1 | G | | 2HL | | Toothed lemma 1 | 44: 68 | 309 |
| 70 | Rph1 | Pa | | 2H | | Reaction to *Puccinia hordei* 1 | 26:107 | 1313 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 71 | com2 | bir2 | | 2HS | | Compositum 2 | 45: 95 | 1700 |
| 72 | glo-c | glo-c | | 2H | | Globosum-c | 43: 68 | 1329 |
| 73 | fol-a | fol-a | | 2HL | | Angustifolium-a | 43: 69 | 1744 |
| 74 | flo-c | flo-a | | 6HL | | Extra floret-c | 45: 97 | 1743 |
| 75 | Lks1 | Lk | | 2HL | | Awnless 1 | 41: 84 | 44 |
| 76 | Pre2 | Re2, P | | 2HL | | Red lemma and pericarp 2 | 44: 70 | 234 |
| 77 | hcm1 | h | | 2HL | | Short culm 1 | 26:113 | 2492 |
| 78 | mtt4 | mtt,,e, mt | | 2HL | | Mottled leaf 4 | 41: 86 | 1231 |
| 79 | wst7 | rb | | 2HL | | White streak 7 | 41: 87 | 247 |
| 80 | ant2 | pr, rub | | 2HL | | Anthocyanin-less 2 | 45: 98 | 1632 |
| 81 | gsh7 | gs7 | | 1H/2H/5H | | Glossy sheath 7 | 40: 55 | 1759 |
| 82 | Zeo1 | Knd, Ert-r | | 2HL | | Zeocriton 1 | 41: 89 | 1613 |
| 83 | sld2 | sld2 | | 2HS | | Slender dwarf 2 | 44: 74 | 2491 |
| 84 | mss1 | mss | | 5H | | Midseason stripe 1 | 44: 75 | 1404 |
| 85 | yst4 | yst4 | | 2HL | | Yellow streak 4 | 44: 76 | 2502 |
| 86 | fch13 | f13 | | 5HL | | Chlorina seedling 13 | 44: 77 | 16 |
| 87 | fch14 | f14 | | 2HL | | Chlorina seedling 14 | 44: 78 | 1739 |
| 88 | Rph2 | Pa2, A | | 5HS | | Reaction to *Puccinia hordei* 2 | 37:212 | 1593 |
| 89 | ari-g | ari-g, lk10 | | 2H | | Breviaristatum-g | 44: 79 | 1655 |
| 90 | ert-j | ert-j | | 2H | | Erectoides-j | 43: 70 | 484 |
| 91 | ert-q | ert-q | | 6H | | Erectoides-q | 43: 71 | 1562 |
| 92 | ert-u | br5, ari-o | | 7HL | | Erectoides-u | 45:100 | 496 |
| 93 | ert-zd | br7, ari-o | | 7HL | | Erectoides-zd | 45:102 | 504 |
| 94 | abo4 | a4 | | 2H | | Albino seedling 4 | 26:133 | 167 |
| 95 | abo13 | alb,,p | | 2HL | | Albino seedling 13 | 26:134 | 585 |
| 96 | Rph15 | Rph16 | | 2HS | | Reaction to *Puccinia hordei* 15 | 37:214 | 1586 |
| 97 | acr1 | acr | | 2HL | | Accordion rachis 1 | 40: 56 | 1617 |
| 98 | Eam6 | Ea6, Ea | | 2HS | | Early maturity 6 | 37:216 |  |
| 99 | lin1 | s, rin | | 2HL | | Lesser internode number 1 | 41: 92 | 2492 |
| 100 | sld4 | sld.d | | 2HS | | Slender dwarf 4 | 43: 72 | 2479 |
| 101 | als1 | als | | 3HL | | Absent lower laterals 1 | 43: 74 | 1065 |
| 102 | uzu1 | u, *HvBRI1* | | 3HL | | Uzu 1 or semi brachytic 1 | 45:104 | 1300 |
| 104 | yst1 | yst, ys | | 3HS | | Yellow streak 1 | 42:178 | 1140 |
| 105 | xnt3 | xc, vir-l | | 3HS | | Xantha seedling 3 | 26:139 | 66 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 106 | abo6 | ac | | 3HS | | Albino seedling 6 | 26:140 | 30 |
| 107 | wst1 | wst, wst3 | | 3HL | | White streak 1 | 41: 97 | 159 |
| 108 | alm1 | al, ebu-a | | 3HS | | Albino lemma 1 | 43: 76 | 270 |
| 109 | yst2 | yst2 | | 3HS | | Yellow streak 2 | 44: 81 | 570 |
| 111 | dsp10 | lc | | 3HL | | Dense spike 10 | 41: 99 | 71 |
| 112 | abo9 | an | | 3HS | | Albino seedling 9 | 26:146 | 348 |
| 113 | xnt6 | xs | | 3HS | | Xantha seedling 6 | 26:147 | 117 |
| 114 | cur2 | cu2 | | 3HL | | Curly 2 | 44: 82 | 274 |
| 115 | btr1 | bt1 | | 3HS | | Non-brittle rachis 1 | 43: 78 | 1233 |
| 116 | btr2 | bt2 | | 3HS | | Non-brittle rachis 2 | 43: 80 | 842 |
| 117 | fch2 | f2, lg5 | | 3HL | | Chlorina seedling 2 | 26:151 | 107 |
| 118 | lnt1 | rnt, int-l | | 3HL | | Low number of tillers 1 | 43: 82 | 833 |
| 119 | des2 | ds | | 3H | | Desynapsis 2 | 43: 84 | 593 |
| 120 | zeb1 | zb | | 3HL | | Zebra stripe 1 | 43: 86 | 1279 |
| 121 | Rph3 | Pa3 | | 7HL | | Reaction to *Puccinia hordei* 3 | 26:156 | 1316 |
| 122 | Rph5 | Pa5, Pa6 | | 3HS | | Reaction to *Puccinia hordei* 5 | 37:224 | 1597 |
| 123 | Ryd2 | Yd2 | | 3HL | | Reaction to BYDV 2 | 26:158 | 1315 |
| 124 | vrs4 | mul, int-e | | 3HL | | Six-rowed spike 4 | 41:101 | 775 |
| 125 | lzd1 | dw4 | | 3H | | Lazy dwarf 1 | 43: 87 | 1787 |
| 126 | sld1 | dw1 | | 3HL | | Slender dwarf 1 | 41:103 | 2488 |
| 127 | Pub1 | Pub | | 3HL | | Pubescent leaf blade 1 | 44: 84 | 1576 |
| 128 | sca1 | sca | | 3HS | | Short crooked awn 1 | 44: 85 | 2439 |
| 129 | wst6 | wst,,j | | 3HL | | White streak 6 | 41:105 | 2500 |
| 130 | eam10 | easp | | 3HL | | Early maturity 10 | 44: 86 | 2504 |
| 131 | gra-a | gran-a | | 7H | | Granum-a | 44: 88 | 1757 |
| 132 | ari-a | ari-a, lk7 | | 3HS | | Breviaristatum-a | 41:106 | 1648 |
| 133 | sdw2 | sdw-b | | 3HL | | Semidwarf 2 | 45:108 | 2466 |
| 134 | ert-c | ert-c | | 3HL | | Erectoides-c | 41:108 | 471 |
| 135 | ert-ii | uzu1 | | 3HL | | Erectoides-ii | 45:109 | 483 |
| 136 | Rph7 | Pa7, Pa5 | | 3HS | | Reaction to *Puccinia hordei* 7 | 37:228 | 1318 |
| 137 | Rph10 | Rph10 | | 3HL | | Reaction to *Puccinia hordei* 10 | 26:174 | 1588 |
| 138 | nec4 | nec4 | | 3H | | Necrotic leaf spot 4 | 43: 88 |  |
| 139 | nec5 | nec5 | | 3H | | Necrotic leaf spot 5 | 43: 89 |  |
| 140 | xnt8 | xan,,h | | 3HS | | Xantha seedling 8 | 26:177 | 582 |
|  |  |  | |  | |  |  |  |
| Table 2. (continued) | | | | | | | | |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 141 | rym5 | Ym | | 3HL | | Reaction to barley yellow mosaic virus 5 | 32: 90 |  |
| 142 | brh8 | brh.ad | | 3HL | | Brachytic 8 | 42:232 | 1671 |
| 143 | sex8 | sex.j | | 3HS | | Shrunken endosperm xenia 8 | 43: 90 | 2471 |
| 144 | sld5 | sld5 | | 3HS | | Slender dwarf 5 | 44: 90 | 2483 |
| 146 | cal-d | cal-d | | 3H | | Calcaroides-d | 40: 58 | 1698 |
| 147 | mov2 | mo | | 3HS | | Multiovary 2 | 43: 91 | 3642 |
| 148 | brh14 | brh.q,ari-o | | 7HL | | Brachytic 14 | 45:111 | 1682 |
| 149 | Rpc1 |  | | 3H | | Reaction to *Puccinia* *coronata* var*. hordei* 1 | 37:232 | 1601 |
| 150 | scl-b | scl.5 | | 3H/6H | | Scirpoides leaf-b | 40: 60 |  |
| 151 | fch9 | f9 | | 4HS | | Chlorina seedling 9 | 44: 92 | 571 |
| 152 | Kap1 | K | | 4HS | | Hooded lemma 1 | 26:179 | 985 |
| 155 | glf1 | gl, cer-zh | | 4HL | | Glossy leaf 1 | 40: 61 | 98 |
| 156 | lbi2 | lb2, ert-i | | 4HS | | Long basal rachis internode 2 | 44: 93 | 572 |
| 157 | brh2 | br2, ari-l | | 4HL | | Brachytic 2 | 44: 95 | 573 |
| 158 | yhd1 | yh | | 4HL | | Yellow head 1 | 42:250 | 574 |
| 160 | min2 | en-min | |  | | Enhancer of minute 1 | 26:186 | 266 |
| 161 | min1 | min | | 4HL | | Semi-minute dwarf 1 | 44: 97 | 987 |
| 163 | sgh1 | sh1 | | 4HL | | Spring growth habit 1 | 26:188 | 575 |
| 164 | Hln1 | Hn | | 4HL | | Hairs on lemma nerves 1 | 44: 99 | 576 |
| 165 | glf3 | gl3, cer-j | | 4HL | | Glossy leaf 3 | 43: 92 | 577 |
| 166 | msg25 | msg,,r | | 4HL | | Male sterile genetic 25 | 45:113 | 744 |
| 167 | rym1 | Ym | | 4HL | | Reaction to barley yellow mosaic virus 1 | 32: 96 |  |
| 168 | glo-a | glo-a | | 4H | | Globosum-a | 45:115 | 1328 |
| 169 | lgn2 | lg2 | | 4HS | | Light green 2 | 42:264 | 171 |
| 170 | lgn3 | lg3 | | 1HL | | Light green 3 | 44:103 | 171 |
| 171 | lgn4 | lg4, lg9 | | 4HL | | Light green 4 | 44:105 | 681 |
| 172 | lks5 | lk5, ari-c | | 4HL | | Short awn 5 | 41:110 | 1297 |
| 173 | blx3 | bl3 | | 4HL | | Non-blue aleurone xenia 3 | 26:198 | 2506 |
| 174 | blx4 | bl4 | | 4HL | | Non-blue (pink) aleurone xenia 4 | 26:199 | 2507 |
| 176 | ovl1 | ovl | | 4H | | Ovaryless 1 | 35:191 |  |
| 177 | fch10 |  | | 4H | | Chlorina seedling 10 | 43: 95 | 1737 |
| 179 | Hsh1 | Hs | | 4HL | | Hairy leaf sheath 1 | 44:107 | 986 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 180 | sid1 | nls | | 4HL | | Single internode dwarf 1 | 43: 97 | 2477 |
| 181 | eam9 | ea,,c | | 4HL | | Early maturity 9 | 26:204 | 1732 |
| 182 | flo-a | flo-a | | 6HL | | Extra floret-a | 45:116 | 1741 |
| 183 | Ynd1 | Yn | | 4HS | | Yellow node 1 | 44:109 | 1607 |
| 184 | Zeo3 | Zeo.h | | 4HL | | Zeocriton 3 | 32: 99 | 1611 |
| 185 | brh5 | brh.m | | 4HS | | Brachytic 5 | 44:110 | 1678 |
| 186 | sld3 | ant17.567 | | 4HS | | Slender dwarf 3 | 40: 63 | 2480 |
| 187 | brh9 | brh.k | | 4HL | | Brachytic 9 | 43: 99 | 1676 |
| 189 | Acr2 | Acr, lax | | 4HL | | Accordion rachis 2 | 40: 65 | 1071 |
| 190 | tfm1 |  | | 1HL | | Thick filament 1 | 40: 67 |  |
| 191 | fch17 | vy | | 1H/3H | | Chlorina seedling 17 | 40: 68 | 1079 |
| 193 | viv-b | viv-6 | | 4HS | | Viviparoides-b | 43:100 |  |
| 194 | sld7 | sld.f | | 4HL | | Slender dwarf 7 | 43:101 | 2481 |
| 195 | sex9 | sex.l | | 4HL | | Shrunken endosperm xenia 9 | 43:102 | 2473 |
| 196 | sdw7 | sdw.u | | 4HL | | Semidwarf 7 | 43:103 | 2462 |
| 197 | nec34 | nec.k | | 4HS | | Necroticans 34 | 43:104 |  |
| 198 | Rpt8 | QRpts4 | | 4HS | | Reaction to *Pyrenophora teres* 8 | 43:105 |  |
| 201 | fch7 | f7, clo-f7 | | 1HL | | Chlorina seedling 7 | 41:113 | 4 |
| 202 | trd1 | t, bra-c | | 1HL | | Third outer glume 1 | 26:207 | 227 |
| 203 | Blp1 | B | | 1HL | | Black lemma and pericarp 1 | 40: 69 | 988 |
| 207 | abo1 | at | | 1HL | | Albino seedling 1 | 26:210 | 51 |
| 208 | fst2 | fs2 | | 1HL | | Fragile stem 2 | 41:114 | 578 |
| 213 | Sgh3 | Sh3 | | 1HL | | Spring growth habit 3 | 26:212 | 764 |
| 214 | eam8 | eak, mat-a | | 1HL | | Early maturity 8 | 41:116 | 765 |
| 215 | des6 | des6 | | 1HL/ 5HL | | Desynapsis 6 | 43:106 | 597 |
| 218 | Rph4 | Pa4 | | 1HS | | Reaction to *Puccinia hordei* 4 | 42:302 | 1314 |
| 220 | fch3 | f3 | | 1HS | | Chlorina seedling 3 | 40: 71 | 851 |
| 221 | wst5 | wst5 | | 1HL | | White streak 5 | 26:219 | 591 |
| 222 | nec1 | sp,,b | | 1HL | | Necrotic leaf spot 1 | 43:108 | 989 |
| 223 | zeb3 | zb3, zbc | | 1HL | | Zebra stripe 3 | 40: 72 | 1451 |
| 224 | ert-b | ert-b | | 1HL | | Erectoides-b | 40: 74 | 470 |
| 225 | clh1 | clh | | 7H/5H | | Curled leaf dwarf 1 | 40: 76 | 1212 |
| 226 | rvl1 | rvl | | 1HL | | leaf 1 | 40: 77 | 608 |
| 227 | sls1 | sls | | 1HL | | Small lateral spikelet 1 | 40: 78 | 2492 |
| Table 2 (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  | |  |  |  |
| 228 | Sil1 | Sil | | 1H | | Subcrown internode length 1 | 40: 79 | 1604 |
| 229 | cud2 | cud2 | | 1HL | | Curly dwarf 2 | 44:111 | 1712 |
| 230 | glo-e | glo-e | | 3HL | | Globosum-e | 45:117 | 1755 |
| 231 | cur5 | cu5 | | 2HS | | Curly 5 | 41:120 | 1710 |
| 232 | Lys4 | sex5 | | 1HS | | High lysine 4 | 40: 80 | 2475 |
| 233 | xnt7 | xan,,g | | 1HL | | Xantha seedling 7 | 26:231 | 581 |
| 234 | mov3 | mo-a | | 1H | | Multiovary 3 | 32:102 |  |
| 235 | lel1 | lel | | 1HL | | Leafy lemma 1 | 32:103 | 1780 |
| 237 | Rpt2 | Rpt2c | | 1HS | | Reaction to *Pyrenophora teres* 2 | 43:110 |  |
| 238 | ari-t | ari-25 | | 1H | | Breviaristatum-t | 40: 82 |  |
| 239 | sci-b | sci-4 | | 1H/6H | | Scirpoides-b | 40: 83 |  |
| 240 | sdw6 | sdw.f | | 1H/7H | | Semidwarf 6 | 40: 84 | 2449 |
| 241 | Acr3 | acr | | 1HL | | Accordionrachis 3 | 40: 85 | 1071 |
| 242 | sld6 | sld.g | | 1H | | Slender dwarf 6 | 40: 87 | 2482 |
| 244 | dsp11 | dsp.am,  dsp.ao | | 1HL | | Dense spike 11 | 41:121 | 1722  1723 |
| 251 | mul2 | mul2 | | 6HL | | Multiflorus 2 | 26:232 | 1394 |
| 252 | eam7 | HvCO7 | | 6HS | | Early maturity 7 | 45:118 | 579 |
| 253 | cul2 | uc2 | | 6HL | | Uniculm 2 | 43:112 | 531 |
| 254 | rob1 | o, rob-o | | 6HS | | Orange lemma 1 | 37:255 | 707 |
| 255 | xnt5 | xn | | 6HL | | Xantha seedling 5 | 26:237 | 43 |
| 257 | raw5 | r,,e | | 6HL | | Smooth awn 5 | 44:112 | 785 |
| 258 | dsp9 | l9, ert-e | | 6HL | | Dense spike 9 | 43:114 | 1774 |
| 260 | fch11 | f11 | | 6HL | | Chlorina seedling 11 | 45:120 | 1738 |
| 261 | nec2 | nec2 | | 6HS | | Necrotic leaf spot 2 | 26:241 | 1224 |
| 262 | cur1 | cu1 | | 6HL | | Curly 1 | 26:242 | 1705 |
| 263 | cur3 | cu3 | | 6HL | | Curly 3 | 41:125 | 1707 |
| 264 | mtt5 | mt,,f | | 6HL | | Mottled leaf 5 | 41:126 | 2410 |
| 265 | nec3 | nec3 | | 6HS | | Necrotic leaf spot 3 | 43:116 | 1330 |
| 266 | ert-e | ert-e, dsp9 | | 6HL | | Erectoides-e | 43:118 | 477 |
| 267 | Rph11 | Rph11 | | 6HL | | Reaction to *Puccinia hordei* 11 | 26:247 | 1589 |
| 268 | lax-b | lax-b | | 6HL | | Laxatum-b | 44:113 | 1776 |
| 269 | lys6 | lys6 | | 6H | | High lysine 6 | 44:114 | 1786 |
| 270 | abo14 | alb,,q | | 6HL | | Albino seedling 14 | 26:250 | 586 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
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| 271 | abo15 | alb,,t | | 6HS | | Albino seedling 15 | 26:251 |  |
| 272 | Rpt5 | Pta | | 6HL | | Reaction to *Pyrenophora teres* 5 | 43:120 |  |
| 274 | ari-x | ari-22 | | 6H | | Breviaristatum-x | 43:124 |  |
| 301 | fst1 | fs | | 5HL | | Fragile stem 1 | 26:252 | 629 |
| 302 | mtt2 | mt2 | | 5HL | | Mottled leaf 2 | 41:127 | 1398 |
| 303 | var3 | va3 | | 5HL | | Variegated 3 | 44:115 | 1277 |
| 304 | wst2 | wst2 | | 5HL | | White streak 2 | 26:255 | 766 |
| 305 | crm1 | cm | | 5HL | | Cream seedling 1 | 26:256 | 20 |
| 306 | var1 | va | | 5HL | | Variegated 1 | 37:259 | 1278 |
| 308 | lbi1 | lb, rac-a | | 5HL | | Long basal rachis internode 1 | 43:125 | 580 |
| 309 | Sgh2 | Sh2 | | 5HL | | Spring growth habit 2 | 26:259 | 770 |
| 311 | dex1 | sex2 | | 5HS | | Defective endosperm xenia 1 | 26:260 |  |
| 312 | raw1 | r | | 5HL | | Smooth awn 1 | 26:261 | 27 |
| 313 | fch6 | f6, yv | | 5HL | | Chlorina seedling 6 | 44:116 | 1390 |
| 314 | vrs2 | v2 | | 5HL | | Six-rowed spike 2 | 26:263 | 773 |
| 315 | vrs3 | v3, int-a | | 1HL | | Six-rowed spike 3 | 40: 90 | 774 |
| 317 | ddt1 | ddt | | 5HS | | Reaction to DDT 1 | 26:266 | 331 |
| 319 | rpg4 | rpg4 | | 5HL | | Reaction to *Puccinia graminis* 4 | 26:267 | 2438 |
| 320 | int-b | int-b | | 5HL | | Intermedium spike-b | 44:118 | 1764 |
| 321 | srh1 | s, l | | 5HL | | Short rachilla hair 1 | 26:269 | 27 |
| 322 | dsk1 | dsk | | 5HL | | Dusky 1 | 41:128 | 1714 |
| 323 | nld1 | nld | | 5HL | | Narrow leafed dwarf 1 | 26:271 | 769 |
| 324 | cud1 | cud | | 5HL | | Curly dwarf 1 | 26:272 | 1711 |
| 325 | crl1 | crl, cl | | 6H | | Curly lateral 1 | 41:129 | 1211 |
| 326 | blf1 | bb | | 2HL | | Broad leaf 1 | 41:130 | 1393 |
| 327 | flo-b | flo-a | | 6HL | | Extra floret-b | 45:121 | 1742 |
| 328 | ari-e | ari-e, lk9 | | 5HL | | Breviaristatum-e | 41:131 | 1653 |
| 329 | ari-h | ari-h | | 5HL | | Breviaristatum-h | 26:277 | 1656 |
| 330 | ert-g | ert-g, br3 | | 1HL | | Erectoides-g | 41:133 | 479 |
| 331 | ert-n | ert-n | | 5HL | | Erectoides-n | 44:120 | 488 |
| 332 | Ert-r | Ert-r | | 2HL | | Erectoides-r | 41:135 | 492 |
| 333 | Rph12 | Rph12 | | 5HL | | Reaction to *Puccinia hordei* 12 | 26:281 | 1590 |
| 334 | raw6 | r6 | | 5HL | | Smooth awn 6 | 26:282 | 2437 |
| 335 | msg49 | msg,,jw | | 5HL | | Male sterile genetic 49 | 45:122 | 2402 |
| 336 | glo-b | glo-b | | 5HL | | Globosum-b | 26:284 | 1326 |
| 337 | blf2 | bb2, nlh | | 5HL | | Broad leaf 2 | 41:137 | 1667 |
| Table 2. (continued) | | | |  | |  |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no.‡ |
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|  |  |  | |  | |  |  |  |
| 338 | lys1 | lys | | 5HL | | High lysine 1 | 26:286 | 1784 |
| 339 | lys3 | sex3 | | 5HL | | High lysine 3 | 43:127 | 1785 |
| 340 | raw2 | r2 | | 5HL | | Smooth awn 2 | 26:289 | 27 |
| 341 | abo12 | alb,,o | | 5HS | | Albino seedling 12 | 26:290 | 583 |
| 342 | glo-f | glo-e | | 5HL | | Globosum-f | 26:291 |  |
| 343 | Lfb1 | Lfb | | 5HL | | Leafy bract 1 | 41:140 | 1577 |
| 344 | var2 | va2 | | 5HL | | Variegated 2 | 32:104 | 2496 |
| 345 | rym3 | ym3 | | 5HS | | Reaction to barley yellow mosaic virus 3 | 32:105 |  |
| 346 | yst5 | yst5 | | 7HS | | Yellow streak 5 | 43:130 | 2501 |
| 347 | mnd4 | m4 | | 5HL | | Many noded dwarf 4 | 44:122 | 1798 |
| 348 | Eam5 | HvPhyC-e | | 5HL | | Early maturity 5 | 45:123 |  |
| 349 | brh4 | brh.j | | 2HL | | Brachytic 4 | 42:407 | 1675 |
| 350 | brh6 | brh.s | | 5HS | | Brachytic 6 | 42:408 | 1683 |
| 351 | gsh1 | gs1, cer-q | | 2HS | | Glossy sheath 1 | 43:131 | 735 |
| 352 | gsh2 | gs2, cer-b | | 3HL | | Glossy sheath 2 | 44:124 | 736 |
| 353 | gsh3 | gs3, cer-a | | 7HS | | Glossy sheath 3 | 41:143 | 737 |
| 354 | gsh4 | gs4, cer-x | | 6HL | | Glossy sheath 4 | 41:146 | 738 |
| 355 | gsh5 | gs5, cer-s | | 2HL | | Glossy sheath 5 | 44:126 | 739 |
| 356 | gsh6 | gs6, cer-c | | 2HS | | Glossy sheath 6 | 43:135 | 740 |
| 357 | msg1 | ms1 | | 1HL | | Male sterile genetic 1 | 45:126 | 1810 |
| 358 | msg2 | ms2 | | 2HL | | Male sterile genetic 2 | 45:128 | 2371 |
| 359 | msg3 | ms3 | | 2HS | | Male sterile genetic 3 | 45:130 | 1130 |
| 360 | msg4 | ms4 | | 1H | | Male sterile genetic 4 | 45:132 | 2392 |
| 361 | msg5 | ms5 | | 3HS | | Male sterile genetic 5 | 45:133 | 2403 |
| 362 | msg6 | ms6 | | 6HS | | Male sterile genetic 6 | 45:135 | 2405 |
| 363 | msg7 | ms7 | | 5HL | | Male sterile genetic 7 | 45:137 | 2406 |
| 364 | msg8 | ms8 | | 5HL | | Male sterile genetic 8 | 45:139 | 2407 |
| 365 | msg9 | ms9 | | 2HS | | Male sterile genetic 9 | 45:141 | 2408 |
| 366 | msg10 | ms10 | | 7HS | | Male sterile genetic 10 | 45:142 | 1811 |
| 367 | msg11 | ms11 | | 5HS | | Male sterile genetic 11 | 45:144 | 1812 |
| 368 | msg13 | ms13 | | 3HL | | Male sterile genetic 13 | 45:146 | 1813 |
| 369 | msg14 | ms14 | | 7HS | | Male sterile genetic 14 | 45:147 | 1814 |
| 370 | msg15 | ms15 | |  | | Male sterile genetic 15 | 45:149 | 1815 |
| 371 | msg16 | ms16 | | 5HS | | Male sterile genetic 16 | 45:150 | 1816 |
| Table 2. (continued) | | | |  |  | |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  |  | |  |  |
| 372 | msg17 | ms17 | | 5HL | Male sterile genetic 17 | | 45:152 | 1817 |
| 373 | msg18 | ms18 | | 5HL | Male sterile genetic 18 | | 45:153 | 1818 |
| 374 | msg19 | ms19 | | 5HS | Male sterile genetic 19 | | 45:155 | 1819 |
| 375 | msg20 | Msg,,ad | | 4H | Male sterile genetic 20 | | 45:156 | 2372 |
| 376 | msg21 | ms21 | | 1HL | Male sterile genetic 21 | | 45:157 | 2373 |
| 377 | seg1 | se1 | | 7HL | Shrunken endosperm genetic 1 | | 45:158 | 750 |
| 378 | seg2 | se2 | | 7HS | Shrunken endosperm genetic 2 | | 26:326 | 751 |
| 379 | seg3 | se3, ant17 | | 3H | Shrunken endosperm genetic 3 | | 45:160 | 752 |
| 380 | seg4 | se4 | | 7HL | Shrunken endosperm genetic 4 | | 37:267 | 753 |
| 381 | seg5 | se5 | | 7HS | Shrunken endosperm genetic 5 | | 26:329 | 754 |
| 382 | sex1 | lys5 | | 6HL | Shrunken endosperm xenia 1 | | 26:330 | 755 |
| 383 | msg22 | ms22 | | 7H | Male sterile genetic 22 | | 45:162 | 741,  2374 |
| 384 | msg23 | ms23 | | 7HL | Male sterile genetic 23 | | 45:163 | 2375 |
| 385 | msg24 | ms24 | | 4HL | Male sterile genetic 24 | | 45:164 | 2376 |
| 386 | des3 | des3 | | 2H/  5HL | Desynapsis 3 | | 43:140 | 594 |
| 387 | des8 | des8 | | 3H | Desynapsis 8 | | 41:151 | 599 |
| 388 | des9 | des9 | | 7HL | Desynapsis 9 | | 44:131 | 600 |
| 389 | des10 | des,,p | | 5HL | Desynapsis 10 | | 41:152 | 601 |
| 390 | des11 | des11 | | 3HL | Desynapsis 11 | | 44:132 | 602 |
| 391 | des12 | des12 | | 3H | Desynapsis 12 | | 44:133 | 603 |
| 392 | des13 | des13 | | 3H | Desynapsis 13 | | 44:134 | 604 |
| 393 | des14 | des14 | | 7H | Desynapsis 14 | | 44:135 | 605 |
| 394 | des15 | des15 | | 3HL | Desynapsis 15 | | 44:136 | 606 |
| 395 | msg26 | msg,,u | | 7HS | Male sterile genetic 26 | | 45:166 | 745 |
| 396 | seg6 | se6 | | 3HL | Shrunken endosperm genetic 6 | | 44:138 | 2467 |
| 397 | seg7 | se7 | |  | Shrunken endosperm genetic 7 | | 37:269 | 2468 |
| 399 | cer-d | cer-d | | 5HL | Eceriferum-d | | 41:153 | 425 |
| 400 | cer-e | cer-e | | 1HL | Eceriferum-e | | 40:102 | 1518 |
| 401 | cer-f | cer-f | | 1H | Eceriferum-f | | 40:104 | 427 |
| 402 | cer-g | cer-g | | 2HL | Eceriferum-g | | 44:140 | 428 |
| 403 | cer-h | cer-h | | 4HS | Eceriferum-h | | 41:157 | 429 |
| 404 | cer-i | cer-i | | 5HL | Eceriferum-i | | 41:158 | 430 |
| 405 | cer-k | cer-k | | 4HL | Eceriferum-k | | 41:160 | 432 |
| Table 2. (continued) | | | |  |  | |  |  |
| BGS  no. | Locus symbol\* | | | Chr.  loc.† | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. | |
|  |  |  | |  |  | |  |  |
| 406 | cer-l | cer-l | | 3HL | Eceriferum-l | | 44:142 | 433 |
| 407 | cer-m | cer-m | | 1HL/  3HL | Eceriferum-m | | 41:161 | 434 |
| 408 | cer-n | gs9 | | 2HL | Eceriferum-n | | 44:143 | 435 |
| 409 | cer-o | cer-o | | 1HL | Eceriferum-o | | 40:106 | 436 |
| 410 | cer-p | cer-p | | 7HL | Eceriferum-p | | 41:162 | 437 |
| 411 | cer-r | cer-r | | 3HL | Eceriferum-r | | 45:168 | 439 |
| 412 | cer-t | cer-t | | 5HL | Eceriferum-t | | 41:164 | 441 |
| 413 | gsh8 | cer-u, gs8 | | 2HS | Glossy sheath 8 | | 43:141 | 442 |
| 414 | cer-v | cer-v | | 2HS | Eceriferum-v | | 44:147 | 443 |
| 415 | cer-w | cer-w | | 5HL | Eceriferum-w | | 41:166 | 1519 |
| 417 | cer-y | cer-y | | 1HS | Eceriferum-y | | 44:149 | 446 |
| 418 | cer-z | cer-z | | 7HS | Eceriferum-z | | 44:150 | 447 |
| 419 | cer-za | cer-za | | 5HL | Eceriferum-za | | 43:144 | 1521 |
| 420 | cer-zb | cer-zb | | 5HS | Eceriferum-zb | | 42:508 | 1522 |
| 421 | cer-zc | cer-zc | | 4HL/  2HS | Eceriferum-zc | | 42:510 | 450 |
| 422 | cer-zd | cer-zd | | 3HL | Eceriferum-zd | | 40:110 | 451 |
| 423 | cer-ze | gl5 | | 7HS | Eceriferum-ze | | 44:152 | 452 |
| 424 | cer-zf | cer-zf | | 3H/  7HS | Eceriferum-zf | | 42:516 | 453 |
| 425 | cer-zg | cer-zg | | 4HL | Eceriferum-zg | | 26:377 | 454 |
| 427 | cer-zi | cer-zi | | 1HL | Eceriferum-zi | | 41:168 | 456 |
| 428 | cer-zj | cer-zj | | 5HL | Eceriferum-zj | | 42:520 | 457 |
| 429 | cer-zk | cer-zk | | 2H | Eceriferum-zk | | 43:146 | 458 |
| 430 | cer-zl | cer-zl | |  | Eceriferum-zl | | 26:382 | 459 |
| 431 | cer-zn | cer-zn | | 1H | Eceriferum-zn | | 40:112 | 1523 |
| 432 | cer-zo | cer-zo | | 3HS | Eceriferum-zo | | 44:154 | 462 |
| 433 | cer-zp | cer-zp | | 5HL | Eceriferum-zp | | 26:385 | 463 |
| 434 | cer-zq | cer-zq | |  | Eceriferum-zq | | 26:386 | 1524 |
| 435 | cer-zr | cer-zr | | 5HL | Eceriferum-zr | | 44:155 | 1525 |
| 436 | cer-zs | cer-zs | |  | Eceriferum-zs | | 44:156 | 1526 |
| 437 | cer-zt | cer-zt | | 2HS | Eceriferum-zt | | 44:157 | 1527 |
| 438 | cer-zu | cer-zu | | 1HS | Eceriferum-zu | | 41:170 | 1528 |
| 439 | cer-zv | cer-zv | |  | Eceriferum-zv | | 26:391 | 1529 |
| Table 2. (continued) | | | | | | | | |
| BGS  no. | Locus symbol\*  Rec. Prev. | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
|  |  |  |  | |  | |  |  |
| 440 | cer-zw | cer-zw |  | | Eceriferum-zw | | 26:392 | 1530 |
| 441 | cer-zx | cer-zx | 3H | | Eceriferum-zx | | 44:158 | 1531 |
| 442 | cer-zy | cer-zy | 1HS | | Eceriferum-zy | | 40:116 | 1532 |
| 443 | cer-zz | cer-zz | 3HL | | Eceriferum-zz | | 44:159 | 1533 |
| 444 | cer-ya | cer-ya | 3HS | | Eceriferum-ya | | 26:396 | 1534 |
| 445 | cer-yb | cer-yb | 2HL | | Eceriferum-yb | | 41:171 | 1535 |
| 446 | cer-yc | cer-yc | 6H/ 7HS | | Eceriferum-yc | | 41:172 | 1536 |
| 447 | cer-yd | cer-yd | 3HS | | Eceriferum-yd | | 26:399 | 1537 |
| 448 | cer-ye | cer-ye | 4H | | Eceriferum-ye | | 43:149 | 1538 |
| 449 | cer-yf | cer-yf | 7H | | Eceriferum-yf | | 44:160 | 1539 |
| 450 | cer-yg | cer-yg | 7HS | | Eceriferum-yg | | 44:161 | 1540 |
| 451 | cer-yh | cer-yh | 3HS | | Eceriferum-yh | | 26:403 | 1541 |
| 453 | fer1 |  |  | | Few roots | | 44:162 |  |
| 454 | blx5 | bl5 | 7HL | | Non-blue aleurone xenia 5 | | 26:404 | 2509 |
| 455 | seg8 | seg8 | 7H | | Shrunken endosperm genetic 8 | | 45:170 | 2469 |
| 460 | cur4 | cu4,  glo-d | 2HL | | Curly 4 | | 45:172 | 1708 |
| 461 | zeb2 | zb2, fch10 | 4HS | | Zebra stripe 2 | | 43:152 | 93 |
| 462 | yst3 | yst,,c | 3HS | | Yellow streak 3 | | 44:163 | 48 |
| 463 | gig1 | gig, sf | 2HL | | Gigas 1 | | 44:164 | 1650 |
| 464 | msg27 | msg,,ae | 2HS | | Male sterile genetic 27 | | 45:174 | 2379 |
| 465 | msg28 | msg,,as | 2HS | | Male sterile genetic 28 | | 45:175 | 2380 |
| 466 | msg29 | msg,,a | 5HL | | Male sterile genetic 29 | | 45:176 | 2381 |
| 467 | msg30 | msg,,c | 7HL | | Male sterile genetic 30 | | 45:177 | 2382 |
| 468 | msg31 | msg,,d | 1HL | | Male sterile genetic 31 | | 45:178 | 2383 |
| 469 | msg32 | msg,,w | 7H | | Male sterile genetic 32 | | 45:179 | 2384 |
| 470 | msg33 | msg,,x | 2HS | | Male sterile genetic 33 | | 45.180 | 2385 |
| 471 | msg34 | msg,,av | 6HS/  7HS | | Male sterile genetic 34 | | 45:181 | 2386 |
| 472 | abr1 | abr | 2HL | | Accordion basal rachis internode 1 | | 26:419 | 1563 |
| 473 | com1 | bir1 | 5HL | | Compositum 1 | | 40:118 | 1702 |
| 474 | lax-a | lax-a | 5HL | | Laxatum-a | | 40:120 | 1775 |
| 475 | lax-c | lax-c | 6HL | | Laxatum-c | | 41:174 | 1777 |
| 498 | msg35 | msg,,dr | 2HL | | Male sterile genetic 35 | | 45:183 | 2387 |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |
|  |  |  |  | |  | |  |  |
| 499 | msg36 | msg,,bk | 6HS | | Male sterile genetic 36 | | 45:184 | 2388 |
| 500 | msg37 | msg,,hl | 3HL | | Male sterile genetic 37 | | 45:186 | 2389 |
| 501 | msg38 | msg,,jl | 3H | | Male sterile genetic 38 | | 45:187 | 2390 |
| 502 | msg39 | msg,,dm | 3H | | Male sterile genetic 39 | | 45:188 | 2391 |
| 503 | msg40 | msg,,ac | 6HL | | Male sterile genetic 40 | | 45:190 | 2393 |
| 504 | msg41 | msg,,aj | 6HS | | Male sterile genetic 41 | | 45:191 | 2394 |
| 505 | msg42 | msg,,db | 3H | | Male sterile genetic 42 | | 45:193 | 2395 |
| 506 | msg43 | msg,,br | 2HL | | Male sterile genetic 43 | | 45:194 | 2396 |
| 507 | msg44 | msg,,cx | 5HL | | Male sterile genetic 44 | | 45:195 | 2397 |
| 508 | msg45 | msg,,dp | 5HL/  7HS | | Male sterile genetic 45 | | 45:196 | 2398 |
| 509 | msg46 | msg,,ec | 2H/6H | | Male sterile genetic 46 | | 45:197 | 2399 |
| 510 | msg47 | msg,,ep | 3HS/  7HS | | Male sterile genetic 47 | | 45:198 | 2400 |
| 511 | Rpg1 | T | 7HS | | Reaction to *Puccinia graminis* 1 | | 26:437 | 701 |
| 512 | Rpg2 | T2 |  | | Reaction to *Puccinia graminis* 2 | | 26:439 | 187 |
| 513 | xnt2 | xb |  | | Xantha seedling 2 | | 26:440 | 2 |
| 515 | Rsp1 | Sep |  | | Reaction to *Septoria passerinii* 1 | | 26:441 | 2510 |
| 516 | Rsp2 | Sep2 |  | | Reaction to *Septoria passerinii* 2 | | 37:275 | 2511 |
| 517 | Rsp3 | Sep3 |  | | Reaction to *Septoria passerinii* 3 | | 37:276 | 2512 |
| 518 | sdw1 | denso | 3HL | | Semidwarf 1 | | 41:176 | 2513 |
| 519 | mnd1 | m | 2H | | Many-noded dwarf 1 | | 43:154 | 253 |
| 520 | msg48 | msg,,jt | 1H | | Male sterile genetic 48 | | 45:199 | 2401 |
| 521 | mtt1 | mt. mt3 | 1HL | | Mottled leaf 1 | | 41:179 | 622 |
| 522 | cer-yi | cer-yi | 2H | | Eceriferum-yi | | 41:180 | 1542 |
| 523 | cer-yj | cer-yj | 1HS | | Eceriferum-yj | | 40:124 | 1543 |
| 524 | cer-yk | cer-yk | 7HL | | Eceriferum-yk | | 44:167 | 1544 |
| 525 | cer-yl | cer-yl | 4HL | | Eceriferum-yl | | 26:452 | 1545 |
| 526 | cer-ym | cer-ym |  | | Eceriferum-ym | | 26:453 | 1546 |
| 527 | cer-yn | cer-yn | 1H | | Eceriferum-yn | | 40:125 | 1547 |
| 528 | cer-yo | cer-yo | 4HS | | Eceriferum-yo | | 44:168 | 1548 |
| 529 | cer-yp | cer-yp | 5HS | | Eceriferum-yp | | 44:169 | 1549 |
| 530 | cer-yq | cer-yq | 5H | | Eceriferum-yq | | 44:170 | 1550 |
| 531 | cer-yr | cer-yr | 5HL | | Eceriferum-yr | | 44:171 | 1551 |
|  |  |  |  | |  | |  |  |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |
| 532 | cer-ys | cer-ys | 2HL | | Eceriferum-ys | | 44:172 | 1552 |
| 533 | cer-yt | cer-yt | 1H/5H | | Eceriferum-yt | | 40:126 | 1553 |
| 534 | cer-yu | cer-yu | 1H | | Eceriferum-yu | | 40:127 | 1554 |
| 535 | cer-yx | cer-yx | 1H/3H/5H | | Eceriferum-yx | | 40:128 | 1555 |
| 536 | Cer-yy | Gle1 | 1HS | | Eceriferum-yy | | 40:129 | 1556 |
| 537 | cer-yz | cer-yz | 1H/5H | | Eceriferum-yz | | 44:173 | 1557 |
| 538 | cer-xa | cer-xa | 2HL/4H/5HL | | Eceriferum-xa | | 44:174 | 1558 |
| 539 | cer-xb | cer-xb | 4H | | Eceriferum-xb | | 44:175 | 1559 |
| 540 | cer-xc | cer-xc | 1H | | Eceriferum-xc | | 44:176 | 1560 |
| 541 | cer-xd | cer-xd | 4H/5HL | | Eceriferum-xd | | 44:177 | 1561 |
| 542 | Dwf2 | Dwf2 |  | | Dominant dwarf 2 | | 24:170 |  |
| 543 | int-f | int-f | 2HS/  3HL | | Intermedium spike-f | | 44:178 | 1767 |
| 544 | int-h | int-h | 5H | | Intermedium spike-h | | 44:179 | 1768 |
| 545 | int-i | int-i | 2HS | | Intermedium spike-i | | 41:181 | 1769 |
| 546 | int-k | int-k | 7H | | Intermedium spike-k | | 44:180 | 1770 |
| 547 | int-m | int-m | 5HL | | Intermedium spike-m | | 44:181 | 1772 |
| 548 | Fol-b | Ang | 1HS | | Angustifolium-b | | 40:131 | 17 |
| 549 | Lga1 | Log | 7HS | | Long glume awn 1 | | 44:183 | 835 |
| 550 | ari-b | ari-b |  | | Breviaristatum-b | | 44:185 | 1649 |
| 551 | ari-f | ari-f | 7H | | Breviaristatum-f | | 41:182 | 1654 |
| 552 | ari-j | ari-j |  | | Breviaristatum-j | | 44:186 | 1658 |
| 553 | ari-k | ari-k | 3H | | Breviaristatum-k | | 44:187 | 1659 |
| 554 | ari-m | ari-m | 7HS | | Breviaristatum-m | | 41:184 | 1661 |
| 555 | ari-n | ari-n | 7H | | Breviaristatum-n | | 41:185 | 1662 |
| 556 | ari-o | ari-o | 7HL | | Breviaristatum-o | | 45:200 | 1663 |
| 557 | ari-p | ari-p |  | | Breviaristatum-p | | 40:132 | 1664 |
| 558 | ari-q | ari-q | 4H | | Breviaristatum-q | | 44:188 | 1665 |
| 559 | ari-r | ari-r | 5H | | Breviaristatum-r | | 41:187 | 1666 |
| 560 | ert-f | ert-f | 1H | | Erectoides-f | | 40:133 | 478 |
| 561 | ert-h | ert-h | 5HL | | Erectoides-h | | 44:189 | 481 |
| 562 | ert-k | ert-k | 6H | | Erectoides-k | | 43:156 | 485 |
| 563 | ert-l | ert-l |  | | Erectoides-l | | 26:489 | 486 |
| 564 | ert-p | ert-p |  | | Erectoides-p | | 26:490 | 490 |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |
|  |  |  |  | |  | |  |  |
| 565 | ert-s | ert-s |  | | Erectoides-s | | 26:491 | 493 |
| 566 | ert-t | ert-t, brh3 | 2HS | | Erectoides-t | | 45:203 | 494 |
| 567 | ert-v | ert-v | 6H | | Erectoides-v | | 41:188 | 497 |
| 568 | ert-x | ert-x | 1H/7H | | Erectoides-x | | 40:136 | 498 |
| 569 | ert-y | ert-y |  | | Erectoides-y | | 26:495 | 499 |
| 570 | ert-z | ert-z |  | | Erectoides-z | | 26:496 | 500 |
| 571 | ert-za | ert-za | 5H | | Erectoides-za | | 44:190 | 501 |
| 572 | ert-zb | ert-zb | 7HL | | Erectoides-zb | | 45:205 | 502 |
| 573 | ert-zc | ert-zc | 7HS | | Erectoides-zc | | 45:206 | 503 |
| 574 | ert-ze | ert-ze | 5HS | | Erectoides-ze | | 45:207 | 505 |
| 575 | Rph6 | Pa6 |  | | Reaction to *Puccinia hordei* 6 | | 26:501 | 1598 |
| 576 | Rph8 | Pa8 |  | | Reaction to *Puccinia hordei* 8 | | 26:502 | 1600 |
| 577 | Rsg2 | Rsg2 |  | | Reaction to *Schizaphis graminum* 2 | | 37:283 | 2513 |
| 578 | mat-b | mat-b |  | | Praematurum-b | | 26:584 | 1788 |
| 579 | mat-c | mat-c |  | | Praematurum-c | | 26:506 | 1789 |
| 580 | mat-d | mat-d | 4Hl/  6HL | | Praematurum-d | | 45:208 | 1790 |
| 581 | mat-e | mat-e |  | | Praematurum-e | | 26:508 | 1791 |
| 582 | mat-f | mat-f | 1H | | Praematurum-f | | 45:210 | 1792 |
| 583 | mat-g | mat-g |  | | Praematurum-g | | 26:510 | 1793 |
| 584 | mat-h | mat-h | 4HL | | Praematurum-h | | 45:212 | 1794 |
| 585 | mat-i | mat-i | 7HL | | Praematurum-i | | 45:214 | 1795 |
| 586 | bra-d | bra-d | 1HL | | Bracteatum-d | | 40:139 | 1696 |
| 587 | abo3 | a2, alb-za |  | | Albino seedling 3 | | 26:514 | 165 |
| 588 | abo10 | at2 |  | | Albino seedling 10 | | 26:515 | 57 |
| 589 | abo11 | at3, albt |  | | Albino seedling 11 | | 26:516 | 233 |
| 590 | Rph13 | Rph13 |  | | Reaction to *Puccinia hordei* 13 | | 28: 31 | 1591 |
| 591 | Rph14 | Rph14 |  | | Reaction to *Puccinia hordei* 14 | | 28: 32 | 1592 |
| 592 | yhd2 | yh2 |  | | Yellow head 2 | | 45:215 | 757 |
| 593 | adp1 | adp | 3HL | | Awned palea 1 | | 43:158 | 1618 |
| 594 | ant3 | rub |  | | Anthocyanin-deficient 3 | | 29: 82 | 1641 |
| 595 | ant4 | ant4 | 4H | | Anthocyanin-deficient 4 | | 45:216 | 1642 |
| 596 | ant5 | rs2 |  | | Anthocyanin-deficient 5 | | 29: 84 | 1643 |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |
|  |  |  |  | |  | |  |  |
| 597 | ant6 | ant6 |  | | Anthocyanin-deficient 6 | | 29: 85 | 1644 |
| 598 | ant13 | ant13 | 6HL | | Proanthocyanin-free 13 | | 29: 86 | 1624 |
| 599 | ant17 | ant17 | 3HS | | Proanthocyanin-free 17 | | 45:218 | 1628 |
| 600 | ant18 | ant18 | 3H | | Proanthocyanin-free 18 | | 45:221 | 1630 |
| 601 | ant19 | ant19 |  | | Proanthocyanin-free 19 | | 29: 92 | 1631 |
| 602 | ant20 | ant20 |  | | Anthocyanin-rich 20 | | 29: 93 | 1633 |
| 603 | ant21 | ant21 | 6H | | Proanthocyanin-free 21 | | 29: 94 | 1634 |
| 604 | ant22 | ant22 | 2HL | | Proanthocyanin-free 22 | | 41:191 | 1635 |
| 605 | ant25 | ant25 |  | | Proanthocyanin-free 25 | | 29: 96 | 1638 |
| 606 | ant26 | ant26 |  | | Proanthocyanin-free 26 | | 29: 97 | 1639 |
| 607 | ant27 | ant27 |  | | Proanthocyanin-free 27 | | 29: 98 | 1640 |
| 608 | ant28 | ant28 | 3HL | | Proanthocyanin-free 28 | | 29: 99 |  |
| 609 | ant29 | ant29 |  | | Proanthocyanin-free 29 | | 29:100 |  |
| 610 | ant30 | ant30 |  | | Proanthocyanin-free 30 | | 29:101 |  |
| 611 | Nec6 | Sp | 7HS | | Necrotic leaf spot 6 | | 43:159 | 977 |
| 612 | gig2 | gig2 | 4HL | | Gigas 2 | | 44:191 | 1750 |
| 613 | brc1 | brc-5, com2 | 2HS | | Branched 1 | | 45:224 |  |
| 614 | Zeo2 | Mo1,  Zeo3 | 2HL | | Zeocriton 2 | | 41:193 | 637 |
| 615 | wxs1 | wxs1 | 7H/  2HL | | Waxy spike 1 | | 43:160 | 3649 |
| 616 | cul3 | cul3 | 3HL | | Uniculme 3 | | 43:161 | 2494 |
| 617 | cul4 | uc-5,  uc-3 | 3HL | | Uniculme 4 | | 44:192 | 2495 |
| 618 | mnd3 | mn3, m3 | 4HS | | Many noded dwarf 3 | | 44:194 | 1797 |
| 619 | bra-a | bra-a | 7H | | Bracteatum-a | | 44:196 | 1693 |
| 620 | cal-b | cal-b | 5HL | | Calcaroides-b | | 44:197 | 1697 |
| 621 | Cal-c | Cal-c | 5HL | | Calcaroides-c | | 41:195 | 1567 |
| 622 | cal-e | cal-23 | 5HS | | Calcaroides-e | | 32:123 |  |
| 623 | eli-a | lig-a |  | | Eligulum-a | | 44:199 | 3647 |
| 624 | ops1 | op-3 | 7HS | | Opposite spikelets 1 | | 45:226 | 2427 |
| 625 | sci-a | sci-3 | 5H | | Scirpoides 1 | | 44:200 |  |
| 626 | scl-a | scl-6 | 1HL | | Scirpoides leaf-a | | 44:201 |  |
| 627 | viv-a | viv-5 | 2H | | Viviparoides-a | | 45:227 | 2498 |
| 628 | sex7 | sex.i | 5HL | | Shrunken endosperm 7 | | 32:129 | 2470 |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |  | |
|  |  |  |  | |  | |  |  |
| 629 | mtt6 | mtt6 | 7HS | | Mottled leaf 6 | | 45:228 | 2411 |
| 630 | Ari-s | ari-265 | 5H/7H | | Breviaristatum-s | | 41:197 |  |
| 631 | brh3 | brh.g, ert-t | 2HS | | Brachytic 3 | | 45:229 | 1672 |
| 632 | mnd5 | mnd5 | 7HL | | Many noded dwarf 5 | | 44:202 |  |
| 633 | mnd6 | den-6 | 5HL | | Many noded dwarf 6 | | 44:203 | 1713 |
| 634 | pmr2 | nec-50 |  | | Premature ripe 2 | | 32:135 | 2421 |
| 635 | nec7 | nec-45 | 1H/6H/7H | | Necroticans 7 | | 43:166 | 2420 |
| 636 | tst2 |  | 4HL | | Tip sterile 2 | | 43:167 | 1781 |
| 637 | nar1 | nar1 | 6HS | | NADH nitrate reductase-deficient 1 | | 35:194 | 2431 |
| 638 | nar2 | nar2 | 5HL | | NADH nitrate reductase-deficient 2 | | 35:195 | 2415 |
| 639 | nar3 | nar3 | 7HS | | NADH nitrate reductase-deficient 3 | | 35:196 | 2416 |
| 640 | nar4 | nar4 | 2Hl | | NADH nitrate reductase-deficient 4 | | 35:197 |  |
| 641 | nar5 | nar5 | 5HL | | NADH nitrate reductase-deficient 5 | | 35:198 | 2417 |
| 642 | nar6 | nar6 | 2HL | | NADH nitrate reductase-deficient 6 | | 35:199 |  |
| 643 | nar7 | nar7 | 6HL | | NADH nitrate reductase-deficient 7 | | 35:200 | 2418 |
| 644 | nar8 | nar8 | 6HS | | NADH nitrate reductase-deficient 8 | | 35:201 |  |
| 645 | bsp1 |  |  | | Bushy spike 1 | | 43:168 | 3652 |
| 646 | ovl2 | ovl2 |  | | Ovaryless 2 | | 43:169 | 3655 |
| 647 | tst1 | tst1 | 6HL | | Tip sterile 1 | | 43:170 | 3644 |
| 648 | mov4 | mo8 |  | | Multiovary 4 | | 43:171 | 3643 |
| 649 | asp1 | asp1 |  | | Aborted spike 1 | | 43:172 | 3654 |
| 650 | sun1 | sun1 |  | | Sensitivity to *Ustilago nuda* 1 | | 43:173 | 3650 |
| 651 | lam1 | lam1 |  | | Late maturity 1 | | 43:174 | 3653 |
| 652 | ylf1 | ylf1 | 7HS | | Yellow leaf 1 | | 43:175 |  |
| 653 | brh10 | brh.l | 2HS | | Brachytic 10 | | 45:231 | 1677 |
| 654 | brh11 | brh.n | 5HS | | Brachytic 11 | | 45:232 | 1679 |
| 655 | brh12 | brh.o | 5HS | | Brachytic 12 | | 45:233 | 1680 |
| Table 2. (continued) | | |  | |  | |  |  |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | Locus name or phenotype | | Descr.  vol. p. | GSHO  no.‡ |
| Rec. | Prev. |  | |
|  |  |  |  | |  | |  |  |
| 656 | brh13 | brh.p | 5HS | | Brachytic 13 | | 45:234 | 1681 |
| 657 | brh15 | brh.u | 2HL | | Brachytic 15 | | 44:205 | 1685 |
| 658 | brh17 | brh.ab | 5HS | | Brachytic 17 | | 45:236 | 1669 |
| 659 | brh18 | brh13 | 5HS | | Brachytic 18 | | 45:237 | 1670 |
| 660 | nld2 |  | 5H/6H/7H | | Narrow leafed dwarf 2 | | 43:176 | 3645 |
| 661 | dub1 |  | 5HL | | Double seed 1 | | 37:301 |  |
| 667 | Rpt1 | Pt | 3HL | | Reaction to *Pyrenophora teres* 1 | | 43:177 |  |
| 671 | nec8 | nec.w | 5HL | | Necrotic leaf spot 8 | | 43:179 | 3600 |
| 672 | nec9 | Mut 3091 | 3HL | | Necrotic leaf spot 9 | | 43:181 | 3599 |
| 673 | cst1 | cs | 5HL | | Corn stalk | | 41:199 |  |
| 674 | mtt8 | Mut  1661 |  | | Mottled leaf 8 | | 43:182 | 3597 |
| 675 | mtt9 | Mut 2721 |  | | Mottled leaf 9 | | 44:207 | 3598 |
| 676 | fch16 | clo.117 | 2HS | | Chlorina seedling 16 | | 40:144 |  |
| 677 | mtt7 | mtt.h | 2HS | | Mottled leaf 7 | | 42:753 |  |
| 678 | ari-u | ari-245 | 2HS | | Breviaristatum-u | | 45:239 |  |
| 679 | acr4 | acr-3 | 2H/ 6HL | | Accordion rachis 4 | | 41:201 |  |
| 680 | ari-v | ari-137 | 5HS | | Breviaristatum-v | | 41:202 |  |
| 681 | nec10 | necS 1-1 | 3H | | Necroticans 10 | | 43:184 | 3607 |
| 682 | nec11 |  | 1H | | Necroticans 11 | | 43:185 | 3610 |
| 683 | nec12 |  |  | | Necroticans 12 | | 43:186 | 3613 |
| 684 | nec13 |  |  | | Necroticans 13 | | 43:187 | 3616 |
| 685 | nec14 |  |  | | Necroticans 14 | | 43:188 | 3619 |
| 686 | nec15 |  |  | | Necroticans 15 | | 43:189 | 3620 |
| 687 | nec16 |  |  | | Necroticans 16 | | 43:190 | 3621 |
| 688 | nec17 |  |  | | Necroticans 17 | | 43:191 | 3622 |
| 689 | nec18 |  |  | | Necroticans 18 | | 43:192 | 3623 |
| 690 | nec19 |  |  | | Necroticans 19 | | 43:193 | 3624 |
| 691 | nec20 |  |  | | Necroticans 20 | | 43:194 | 3625 |
| 692 | nec21 |  |  | | Necroticans 21 | | 43:195 | 3626 |
| 693 | Nec22 |  |  | | Necroticans 22 | | 43:196 | 3627 |
| Table 2. (continued) | | | | | | | | |
| BGS  no. | Locus symbol\* | | Chr.  loc.† | | | Locus name or phenotype | Descr.  vol. p. | BGS  no. |
| Rec. | Prev. |
|  |  |  |  | | |  |  |  |
| 694 | nec23 |  |  | | Necroticans 23 | | 43:197 | 3628 |
| 695 | Nec24 |  |  | | Necroticans 24 | | 43:198 | 3629 |
| 696 | nec25 |  |  | | Necroticans 25 | | 43:199 | 3630 |
| 697 | Nec26 |  |  | | Necroticans 26 | | 43:200 | 3631 |
| 698 | nec27 |  |  | | Necroticans 27 | | 43:201 | 3633 |
| 699 | nec28 |  |  | | Necroticans 28 | | 43:202 | 3635 |
| 700 | nec29 |  |  | | Necroticans 29 | | 43:203 | 3636 |
| 701 | nec30 |  |  | | Necroticans 30 | | 43:204 | 3637 |
| 702 | nec31 |  |  | | Necroticans 31 | | 43:205 | 3638 |
| 703 | nec32 |  |  | | Necroticans 32 | | 43:206 | 3639 |
| 704 | nec33 |  |  | | Necroticans 33 | | 43:207 | 3640 |
| 707 | Rpr1 |  | 4H | | Required for *Puccinia graminis* resistance 1 | | 42:757 |  |
| 711 | Rpt3 | QRptts2 | | 2HS | | Reaction to *Pyrenophora teres* 3 | 43:208 |  |
| 713 | Rpt6 |  | | 5HL | | Reaction to *Pyrenophora teres* 6 | 43:210 |  |
| 714 | Rpt7 | Qrpts4 | | 4HL | | Reaction to *Pyrenophora teres* 7 | 43:211 |  |
| 716 | ibl1 | ibl1 | |  | | Intense blue aleurone 1 | 45:241 |  |
| 718 | ops2 | op-2 | | 5HL | | Opposite spikelets 2 | 43:213 | 2426 |
| 719 | ops3 | op-1 | | 5HS | | Opposite spikelets 3 | 43:214 | 2425 |
| 720 | viv-c | viv-1 | | 5H | | Viviparoides-c | 43:215 | 2497 |
| 721 | ari-w | ari-153 | | 7H | | Breviaristatum-w | 43:216 |  |
| 722 | ari-y | ari-9 | | 5H | | Breviaristatum-y | 43:217 |  |
| 723 | mov5 | mov.o | |  | | Multiovary 5 | 43:218 | 3671 |
| 724 | lks6 | lks.q | | 1H/5H/6H | | Short awn 6 | 43:219 | 3674 |
| 725 | ovl3 |  | |  | | Ovaryless 3 | 43:220 | 3687 |
| 726 | mnd7 |  | |  | | Many noded dwarf 7 | 43:221 | 3686 |
| 727 | ubs5 |  | |  | | Unbranched style 5 | 43:222 | 3675 |
| 728 | fxp1 |  | |  | | Fenoxaprop-p-ethyl reaction 1 | 43:223 | 3684 |
| 729 | dsk2 | msg,,df | | 7HL | | Dusky 2 | 44:208 |  |
| 730 | lab1 |  | | 5HL | | Labile 1 | 45:242 |  |
| 731 | rpr2 | γ08-118; R43-22#1 | | 6H | | Required for *Puccinia graminis* resistance 2 | 45:243 | 3693 |
| 732 | rpr3 | γ08-112; R12-31#3 | |  | | Required for *Puccinia graminis* resistance 3 | 45:244 | 3696 |
| Table 2. (continued) | | | | | | | | |
| BGS  no. | Locus symbol\*  Rec Prev | | | Chr.  loc.† | | Locus name or phenotype | Descr.  vol. p. | GSHO  no |
|  |  |  | |  | |  |  |  |
| 733 | rpr4 | γ08-114; R36-37#1 | |  | | Required for *Puccinia graminis* resistance 4 | 45:245 | 3699 |
| 734 | rpr5 | γ08-117; R42-33#5 | |  | | Required for *Puccinia graminis* resistance 5 | 45:246 | 3700 |
| 735 | rpr6 | γ08-119; R47-23#1 | |  | | Required for *Puccinia graminis* resistance 6 | 45:247 | 3701 |
| 736 | rpr7 | γ08-115; R3-18#3 | |  | | Required for *Puccinia graminis* resistance 7 | 45:248 | 3702 |
| 737 | rcr1 | γ08-122; (R4-29) | |  | | Required for resistance to *Cochliobolus sativus* 1 | 45:249 | 3703 |
| 738 | rcr2 | γ08-123; (R4-40) | |  | | Required for resistance to *Cochliobolus sativus* 2 | 45:250 | 3704 |
| 739 | rcr3 | γ08-124 | |  | | Required for resistance to *Cochliobolus sativus* 3 | 45:251 | 3705 |
| \* Recommended locus symbols are based on utilization of a three-letter code for barley genes as approved at the business meeting of the Seventh International Barley Genetics Symposium at Saskatoon, Saskatchewan, Canada, on 05 August 5 1996. | | | | | | | | |
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| † Chromosome numbers and arm designations are based on a resolution passed at the business meeting of the Seventh International Barley Genetics Symposium at Saskatoon, Saskatchewan, Canada, on August 05 1996. The Burnham and Hagberg (1956) designations of barley chromosomes were 1 2 3 4 5 6 and 7 while new designations based on the Triticeae system are 7H 2H 3H 4H 1H 6H and 5H, respectively. | | | | | | | | |
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|
| ‡ The seed stock associated with each BGS number is held as a GSHO stock number in the Barley Genetics Stock Collection at the USDA-ARS National Small Grains Germplasm Research Facility, Aberdeen, ID 83210, USA. | | | | | | | | |
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**Table 3.** An alphabetic listing of recently published Barley Genetic Stock (BGS) descriptions for loci in barley (*Hordeum vulgare*), including information on chromosomal locations, recommended locus names, description citation, and original cultivars.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Locus symbol\* | | BGS  no. | | Chr.  loc.† | Locus name or phenotype | Descr.  vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| abo1 | at | 207 | | 1HL | Albino seedling 1 | 26:210 | Trebi |
| abo2 | a2 | 53 | | 2HS | Albino seedling 2 | 26: 89 | Nilsson-Ehle No 2 |
| abo3 | alb-za | 587 | |  | Albino seedling 3 | 26:514 | Unknown cultivar |
| abo4 | a4 | 94 | | 2H | Albino seedling 4 | 26:133 | Unknown cultivar |
| abo6 | ac | 106 | | 3HS | Albino seedling 6 | 26:140 | Colsess |
| abo8 | ac2 | 4 | | 7HS | Albino seedling 8 | 26: 47 | Coast |
| abo9 | an | 112 | | 3HS | Albino seedling 9 | 26:146 | Nigrinudum |
| abo10 | at2 | 588 | |  | Albino seedling 10 | 26:515 | Canadian Thorpe |
| abo11 | at3 | 589 | |  | Albino seedling 11 | 26:516 | Trebi |
| abo12 | alb,,o | 341 | | 5HS | Albino seedling 12 | 26:290 | Titan |
| abo13 | alb,,p | 95 | | 2HL | Albino seedling 13 | 26:134 | Titan |
| abo14 | alb,,q | 270 | | 6HL | Albino seedling 14 | 26:250 | Shabet |
| abo15 | alb,,t | 271 | | 6HS | Albino seedling 15 | 26:251 | Betzes |
| abr1 | abr | 472 | | 2HL | Accordion basal rachis internode 1 | 26:419 | Bonus |
| acr1 | acr | 97 | | 2HL | Accordion rachis 1 | 40: 56 | ACBV89B229 |
| Acr2 | Acr,lax | 189 | | 4HL | Accordion rachis 2 | 40: 65 | CIho 6164 |
| Acr3 | acr | 241 | | 1HL | Accordion rachis 3 | 40: 85 | Burma Girl |
| acr4 | acr-3 | 679 | | 2H/ 6HL | Accordion rachis 4 | 41:201 | Bonus |
| adp1 | adp | 593 | | 3HL | Awned palea 1 | 43:158 | Unknown line |
| alm1 | al | 108 | | 3HS | Albino lemma 1 | 43: 76 | Russia 82 |
| als1 | als | 101 | | 3HL | Absent lower laterals 1 | 43: 74 | Montcalm |
| ant1 | rs | 33 | | 7HS | Anthocyanin-less 1 | 42: 89 | Bonus |
| ant2 | pr | 80 | | 2HL | Anthocyanin-less 2 | 44: 72 | Foma |
| ant3 |  | 594 | |  | Anthocyanin-deficient 3 | 29: 82 | Bonus |
| ant4 | ant4 | 595 | | 4H | Anthocyanin-deficient 4 | 45:216 | Foma |
| ant5 |  | 596 | |  | Anthocyanin-deficient 5 | 29: 84 | Bonus |
| ant6 |  | 597 | |  | Anthocyanin-deficient 6 | 29: 85 | Foma |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| ant13 |  | 598 | | 6HL | Proanthocyanidin-free 13 | 29: 86 | Foma |
| ant17 |  | 599 | | 3HS | Proanthocyanidin-free 17 | 45:218 | Nordal |
| ant18 |  | 600 | | 3H | Proanthocyanidin-free 18 | 45:221 | Nordal |
| ant19 |  | 601 | |  | Proanthocyanidin-free 19 | 29: 92 | Alf |
| ant20 |  | 602 | |  | Anthocyanidin-rich 20 | 29: 93 | Foma |
| ant21 |  | 603 | | 6H | Proanthocyanidin-free 21 | 29: 94 | Georgie |
| ant22 |  | 604 | | 2HL | Proanthocyanidin-free 22 | 41:191 | Hege 802 |
| ant25 |  | 605 | |  | Proanthocyanidin-free 25 | 29: 96 | Secobra 18193 |
| ant26 |  | 606 | |  | Proanthocyanidin-free 26 | 29: 97 | Grit |
| ant27 |  | 607 | |  | Proanthocyanidin-free 27 | 29: 98 | Zebit |
| ant28 |  | 608 | | 3HL | Proanthocyanidin-free 28 | 29: 99 | Grit |
| ant29 |  | 609 | |  | Proanthocyanidin-free 29 | 29:100 | Ca 708912 |
| ant30 |  | 610 | |  | Proanthocyanidin-free 30 | 29:101 | Gunhild |
| ari-a |  | 132 | | 3HS | Breviaristatum-a | 41:106 | Bonus |
| ari-b |  | 550 | |  | Breviaristatum-b | 44:185 | Bonus |
| ari-e |  | 328 | | 5HL | Breviaristatum-e | 41:131 | Bonus |
| ari-f |  | 551 | | 7H | Breviaristatum-f | 41:182 | Bonus |
| ari-g |  | 89 | | 2H | Breviaristatum-g | 44: 79 | Bonus |
| ari-h |  | 329 | | 5HL | Breviaristatum-h | 26:277 | Foma |
| ari-j |  | 552 | |  | Breviaristatum-j | 44:186 | Bonus |
| ari-k |  | 553 | | 3H | Breviaristatum-k | 44:187 | Bonus |
| ari-m |  | 554 | | 7HS | Breviaristatum-m | 41:184 | Bonus |
| ari-n |  | 555 | | 7H | Breviaristatum-n | 41:185 | Bonus |
| ari-o |  | 556 | | 7HL | Breviaristatum-o | 45:200 | Bonus |
| ari-p |  | 557 | |  | Breviaristatum-p | 40:132 | Foma |
| ari-q |  | 558 | | 4H | Breviaristatum-q | 44:188 | Kristina |
| ari-r |  | 559 | | 5H | Breviaristatum-r | 41:187 | Bonus |
| Ari-s | ari-265 | 630 | | 5H/7H | Breviaristatum-s | 41:197 | Kristina |
| Ari-t | ari-25 | 238 | | 1H | Breviaristatum-t | 40: 82 | Bonus |
| ari-u | ert-t | 678 | | 2HS | Breviaristatum-u | 45:239 | Foma |
| ari-v | ari-137 | 680 | | 5HS | Breviaristatum-v | 41:202 | Foma |
| ari-w | ari-153 | 721 | | 7H | Breviaristatum-w | 43:216 | Foma |
| ari-x | ari-22 | 274 | | 6H | Breviaristatum-x | 43:124 | Bonus |
| ari-y | ari-9 | 722 | | 5H | Breviaristatum-y | 43:217 | Bonus |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. Loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| asp1 |  | 649 | |  | Aborted spike 1 | 43:172 | Steptoe |
| blf1 | bb | 326 | | 2HL | Broad leaf 1 | 41:130 | Bonus |
| blf2 | bb2 | 337 | | 5HL | Broad leaf 2 | 41:137 | Hannchen |
| Blp1 | B | 203 | | 1HL | Black lemma and pericarp 1 | 40: 69 | Nigrinudum |
| blx1 | bl | 15 | | 4HL | Non-blue aleurone xenia 1 | 26: 60 | Goldfoil |
| blx2 | bl2 | 19 | | 7HS | Non-blue aleurone xenia 2 | 26: 65 | Nepal |
| blx3 | bl3 | 173 | | 4HL | Non-blue aleurone xenia 3 | 26:198 | Blx |
| blx4 | bl4 | 174 | | 4HL | Non-blue (pink) aleurone xenia 4 | 26:199 | Ab 6 |
| blx5 | bl5 | 454 | | 7HL | Non-blue aleurone xenia 5 | 26:404 | BGM 122 |
| bra-a |  | 619 | | 7H | Bracteatum-a | 44:196 | Bonus |
| bra-d |  | 586 | | 1HL | Bracteatum-d | 40:139 | Foma |
| brc1 | brc-5, com2 | 613 | | 2HS | Branched 1 | 45:224 | BGRC 13145 |
| brh1 | br | 1 | | 7HS | Brachytic 1 | 43: 48 | Himalaya |
| brh2 | br2 | 157 | | 4HL | Brachytic 2 | 44: 95 | Svanhals |
| brh3 | brh.g, ert-t | 631 | | 2HS | Brachytic 3 | 45:229 | Birgitta |
| brh4 | brh.j | 349 | | 2HL | Brachytic 4 | 42:407 | Birgitta |
| brh5 | brh.m | 185 | | 4HS | Brachytic 5 | 44:110 | Birgitta |
| brh6 | brh.s | 350 | | 5HL | Brachytic 6 | 42:408 | Akashinriki |
| brh7 | brh.w | 41 | | 7H | Brachytic 7 | 42: 98 | Volla |
| brh8 | brh.ad | 142 | | 3HL | Brachytic 8 | 42:232 | Birgitta |
| brh9 | brh.k | 187 | | 4HL | Brachytic 9 | 43: 99 | Birgitta |
| brh10 | brh.l | 653 | | 2HS | Brachytic 10 | 45:231 | Birgitta |
| brh11 | brh.n | 654 | | 5HS | Brachytic 11 | 45:232 | Birgitta |
| brh12 | brh.o | 655 | | 5HS | Brachytic 12 | 45:233 | Birgitta |
| brh13 | brh.p | 656 | | 5HS | Brachytic 13 | 45:234 | Birgitta |
| brh14 | ari-o | 148 | | 7HL | Brachytic 14 | 45:111 | Akashinriki |
| brh15 | brh.u | 657 | | 2HL | Brachytic 15 | 44:205 | Julia |
| brh16 | brh.v | 44 | | 7HL | Brachytic 16 | 45: 89 | Korál |
| brh17 | brh.ab | 658 | | 5HS | Brachytic 17 | 45:236 | Morex |
| brh18 | brh13 | 659 | | 5HS | Brachytic 18 | 45:237 | Triumph |
|  |  |  | |  |  |  |  |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. Loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| bsp1 |  | 645 | |  | Bushy spike 1 | 43:168 | Morex |
| btr1 | bt1 | 115 | | 3HS | Non-brittle rachis 1 | 43: 78 | A 222 |
| btr2 | bt2 | 116 | | 3HS | Non-brittle rachis 2 | 43: 80 | Sakigoke |
| cal-b |  | 620 | | 5HL | Calcaroides-b | 44:197 | Bonus |
| Cal-c |  | 621 | | 5HL | Calcaroides-c | 41:195 | Bonus |
| cal-d |  | 146 | | 3H | Calcaroides-d | 40: 58 | Foma |
| cal-e |  | 622 | | 5HS | Calcaroides-e | 32:123 | Semira |
| cer-d |  | 399 | | 5HL | Eceriferum-d + ++ ++ | 41:153 | Bonus |
| cer-e |  | 400 | | 1HL | Eceriferum-e -/+ ++ ++ | 40:102 | Bonus |
| cer-f |  | 401 | | 1H | Eceriferum-f + + ++ | 40:104 | Bonus |
| cer-g |  | 402 | | 2HL | Eceriferum-g + + ++ | 44:140 | Bonus |
| cer-h |  | 403 | | 4HS | Eceriferum-h - ++ ++ | 41:157 | Bonus |
| cer-i |  | 404 | | 5HL | Eceriferum-i - ++ ++ | 41:158 | Bonus |
| cer-k |  | 405 | | 4HL | Eceriferum-k + ++ ++ | 41:160 | Bonus |
| cer-l |  | 406 | | 3HL | Eceriferum-l + ++ ++ | 44:142 | Bonus |
| cer-m |  | 407 | | 1H/3H | Eceriferum-m +/++ + ++ | 41:161 | Bonus |
| cer-n | gs9 | 408 | | 2HL | Eceriferum-n - - ++ &  - +/- ++ | 44:143 | Bonus |
| cer-o |  | 409 | | 1HL | Eceriferum-o -/+ ++ ++ | 40:106 | Bonus |
| cer-p |  | 410 | | 7HL | Eceriferum-p ++ ++ + | 41:162 | Bonus |
| cer-r |  | 411 | | 3HL | Eceriferum-r +/- + ++ | 45:168 | Bonus |
| cer-t |  | 412 | | 5HL | Eceriferum-t +/- ++ ++ | 41:164 | Bonus |
| cer-v |  | 414 | | 2HS | Eceriferum-v +/- ++ ++ | 44:147 | Bonus |
| cer-w |  | 415 | | 5HL | Eceriferum-w +/- ++ ++ | 41:166 | Bonus |
| cer-xa |  | 538 | | 2HL/4H/5HL | Eceriferum-xa ++ ++ - | 44:174 | Foma |
| cer-xb |  | 539 | | 4H | Eceriferum-xb - ++ ++ | 44:175 | Bonus |
| cer-xc |  | 540 | | 1H | Eceriferum-xc + + ++ | 44:176 | Bonus |
| cer-xd |  | 541 | | 4H/  5HL | Eceriferum-xd + + ++ | 44:177 | Bonus |
| cer-y |  | 417 | | 1HS | Eceriferum-y + +/++ ++ | 44:149 | Bonus |
| cer-ya |  | 444 | | 3HS | Eceriferum-ya ++ ++ - | 26:396 | Bonus |
| cer-yb |  | 445 | | 2HL | Eceriferum-yb ++ ++ - | 41:171 | Bonus |
| cer-yc |  | 446 | | 6H/ 7HS | Eceriferum-yc - ++ ++ | 41:172 | Bonus |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| cer-yd |  | 447 | | 3HS | Eceriferum-yd - ++ ++ | 26:399 | Bonus |
| cer-ye |  | 448 | | 4H | Eceriferum-ye ++ ++ - | 43:149 | Foma |
| cer-yf |  | 449 | | 7H | Eceriferum-yf ++ ++ + | 44:160 | Bonus |
| cer-yg |  | 450 | | 7HS | Eceriferum-yg - - - | 44:161 | Carlsberg II |
| cer-yh |  | 451 | | 3HS | Eceriferum-yh - ++ ++ | 26:403 | Bonus |
| cer-yi |  | 522 | | 2H | Eceriferum-yi ++ ++ - | 41:180 | Foma |
| cer-yj |  | 523 | | 1HS | Eceriferum-yj ++ ++ - | 40:124 | Bonus |
| cer-yk |  | 524 | | 7HL | Eceriferum-yk + + ++ | 44:167 | Bonus |
| cer-yl |  | 525 | |  | Eceriferum-yl - - ++ | 26:452 | Bonus |
| cer-ym |  | 526 | |  | Eceriferum-ym - - - | 26:453 | Bonus |
| cer-yn |  | 527 | | 1H | Eceriferum-yn + + ++ | 40:125 | Kristina |
| cer-yo |  | 528 | | 4HS | Eceriferum-yo ++ ++ + | 44:168 | Bonus |
| cer-yp |  | 529 | | 5HS | Eceriferum-yp ++ ++ + | 44:169 | Bonus |
| cer-yq |  | 530 | | 5H | Eceriferum-yq ++ ++ - | 44:170 | Kristina |
| cer-yr |  | 531 | | 5HL | Eceriferum-yr -/+ + ++ | 44:171 | Foma |
| cer-ys |  | 532 | | 2HL | Eceriferum-ys ++ ++ - | 44:172 | Bonus |
| cer-yt |  | 533 | | 1H/5H | Eceriferum-yt - ++ ++ | 40:126 | Bonus |
| cer-yu |  | 534 | | 1H | Eceriferum-yu ++ ++ - | 40:127 | Bonus |
| cer-yx |  | 535 | | 1H/3H/5H | Eceriferum-yx + + ++ | 40:128 | Foma |
| Cer-yy | Gle1 | 536 | | 1HS | Eceriferum-yy - ++ ++ | 40:129 | Bonus |
| cer-yz |  | 537 | | 1H/5H | Eceriferum-yz + + ++ | 44:173 | Bonus |
| cer-z |  | 418 | | 7HS | Eceriferum-z - - ++ | 44:150 | Bonus |
| cer-za |  | 419 | | 5HL | Eceriferum-za ++ ++ - | 43:144 | Foma |
| cer-zb |  | 420 | | 5HS | Eceriferum-zb - ++ ++ | 42:508 | Bonus |
| cer-zc |  | 421 | | 4HL/  2HS | Eceriferum-zc +/- ++ ++ | 42:510 | Bonus |
| cer-zd |  | 422 | | 3HL | Eceriferum-zd ++ ++ - | 40:110 | Bonus |
| cer-ze | gl5 | 423 | | 7HS | Eceriferum-ze ++ ++ - | 44:152 | Bonus |
| cer-zf |  | 424 | | 3H/  7HS | Eceriferum-zf ++ ++ + | 42:516 | Bonus |
| cer-zg |  | 425 | | 4HL | Eceriferum-zg ++ ++ + | 26:377 | Foma |
| cer-zi |  | 427 | | 1HL | Eceriferum-zi + + ++ | 41:168 | Bonus |
| cer-zj |  | 428 | | 5HL | Eceriferum-zj ++ ++ - | 42:520 | Bonus |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| cer-zk |  | 429 | | 2H | Eceriferum-zk + + +/- | 26:381 | Bonus |
| cer-zl |  | 430 | |  | Eceriferum-zl - - ++ | 26:382 | Bonus |
| cer-zn |  | 431 | | 1H | Eceriferum-zn +/- ++ ++ | 40:112 | Foma |
| cer-zo |  | 432 | | 3HS | Eceriferum-zo - ++ ++ | 44:154 | Foma |
| cer-zp |  | 433 | | 5HL | Eceriferum-zp ++ ++ - | 26:385 | Bonus |
| cer-zq |  | 434 | |  | Eceriferum-zq ++ ++ - | 26:386 | Foma |
| cer-zr |  | 435 | | 5HL | Eceriferum-zr +/- ++ ++ | 44:155 | Foma |
| cer-zs |  | 436 | |  | Eceriferum-zs + ++ ++ | 44:156 | Foma |
| cer-zt |  | 437 | | 2HS | Eceriferum-zt + ++ ++ | 44:157 | Foma |
| cer-zu |  | 438 | | 1HS | Eceriferum-zu - + ++ | 41:170 | Foma |
| cer-zv |  | 439 | |  | Eceriferum-zv - - - | 26:391 | Foma |
| cer-zw |  | 440 | |  | Eceriferum-zw + + ++ | 26:392 | Foma |
| cer-zx |  | 441 | | 3H | Eceriferum-zx + + ++ | 44:158 | Bonus |
| cer-zy |  | 442 | | 1HS | Eceriferum-zy ++ ++ + | 40:116 | Bonus |
| cer-zz |  | 443 | |  | Eceriferum-zz ++ ++ - | 44:159 | Bonus |
| clh1 | clh | 225 | | 7H/5H | Curled leaf dwarf 1 | 40: 76 | Hannchen |
| com1 | bir1 | 473 | | 5HL | Compositum 1 | 40:118 | Foma |
| com2 | bir2 | 71 | | 2HS | Compositum 2 | 45: 95 | CIMMYT freak |
| crl1 | cl | 325 | | 6H | Curly lateral 1 | 41:129 | Montcalm |
| crm1 | cm | 305 | | 5HL | Cream seedling 1 | 26:256 | Black Hulless |
| cst1 | cs | 673 | | 5HL | Corn stalk | 41:199 | Husky |
| cud1 | cud | 324 | | 5HL | Curly dwarf 1 | 26:272 | Akashinriki |
| cud2 |  | 229 | | 1HL | Curly dwarf 2 | 44:111 | Akashinriki |
| cul2 | uc2 | 253 | | 6HL | Uniculm 2 | 43:112 | Kindred |
| cul3 | cul3 | 616 | | 3HL | Uniculme 3 | 43:161 | Donaria |
| cul4 | uc-5 | 617 | | 3HL | Uniculme 4 | 44:192 | Bonus |
| cur1 | cu1 | 262 | | 6HL | Curly 1 | 26:242 | 48-cr cr-17 |
| cur2 | cu2 | 114 | | 3HL | Curly 2 | 44: 82 | Choshiro |
| cur3 | cu3 | 263 | | 6HL | Curly 3 | 41:125 | Akashinriki |
| cur4 | glo-d | 460 | | 2HL | Curly 4 | 45:172 | Asahi 5 |
| cur5 | cu5 | 231 | | 2HS | Curly 5 | 41:120 | Glenn |
| ddt1 | ddt | 317 | | 5HS | Reaction to DDT 1 | 26:266 | Spartan |
| des1 | lc | 12 | | 7H | Desynapsis 1 | 42: 58 | Mars |
| des2 | ds | 119 | | 3H | Desynapsis 2 | 43: 84 | Husky |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| des3 |  | 386 | | 2H/ 5HL | Desynapsis 3 | 43:140 | Betzes |
| des4 |  | 13 | | 7H | Desynapsis 4 | 44: 54 | Betzes |
| des5 |  | 14 | | 7HL | Desynapsis 5 | 44: 56 | Betzes |
| des6 |  | 215 | | 1HL | Desynapsis 6 | 43:106 | Betzes |
| des7 |  | 64 | | 3H | Desynapsis 7 | 43: 67 | Betzes |
| des8 |  | 387 | | 3H | Desynapsis 8 | 41:151 | Betzes |
| des9 |  | 388 | | 7HL | Desynapsis 9 | 44:131 | Betzes |
| des10 |  | 389 | | 3HL | Desynapsis 10 | 41:152 | Betzes |
| des11 |  | 390 | | 3HL | Desynapsis 11 | 44:132 | Betzes |
| des12 |  | 391 | | 3H | Desynapsis 12 | 44:133 | Betzes |
| des13 |  | 392 | | 3H | Desynapsis 13 | 44:134 | Betzes |
| des14 |  | 393 | | 7H | Desynapsis 14 | 44:135 | Betzes |
| des15 |  | 394 | | 3HL | Desynapsis 15 | 44:136 | Ingrid |
| dex1 | sex2 | 311 | | 5HS | Defective endosperm xenia 1 | 26:260 | BTT 63-j-18-17 |
| dsk1 | dsk | 322 | | 5HL | Dusky 1 | 41:128 | Chikurin-Ibaraki 1 |
| dsk2 |  | 729 | | 7HL | Dusky 2 | 44:208 | Betzes |
| dsp1 | l | 9 | | 7HS | Dense spike 1 | 43: 50 | Honen 6 |
| dsp9 | l9, ert-e | 258 | | 6HL | Dense spike 9 | 43:114 | Akashinriki |
| dsp10 | lc | 111 | | 3HS | Dense spike 10 | 41: 99 | Club Mariout |
| dsp11 | dsp | 244 | | 1HL | Dense spike 11 | 41:121 | Akashinriki |
| dub1 |  | 661 | | 6HL | Double seed 1 | 37:301 | Bonus |
| Dwf2 |  | 542 | |  | Dominant dwarf 2 | 24:170 | Klages / Mata |
| Eam1 | Ppd-H1, Ea | 65 | | 2HS | Early maturity 1 | 44: 64 | Estate |
| Eam5 | HvPhyC-e | 348 | | 5HL | Early maturity 5 | 45:123 | Higuerilla\*2/ Gobernadora |
| eam6 | Ea6, Ea | 98 | | 2HS | Early maturity 6 | 37:216 | Morex |
| eam7 | HvCO7 | 252 | | 6HS | Early maturity 7 | 45:118 | California Mariout |
| eam8 | eak,ert-o | 214 | | 1HL | Early maturity 8 | 41:116 | Kinai 5 |
| eam9 | ea,,c | 181 | | 4HL | Early maturity 9 | 26:204 | Tayeh 8 |
| eam10 | easp | 130 | | 3HL | Early maturity 10 | 44: 86 | Super Precoz |
| eli-a | lig-a | 623 | |  | Eligulum-a | 44:199 | Foma |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| eog 1 | e | 57 | | 2HL | Elongated outer glume 1 | 43: 64 | Triple Bearded Club Mariout |
| ert-a | ert-6 | 28 | | 7HS | Erectoides-a | 41: 76 | Gull |
| ert-b | ert-2 | 224 | | 1HL | Erectoides-b | 40: 74 | Gull |
| ert-c | ert-1 | 134 | | 3HL | Erectoides-c | 41:108 | Gull |
| ert-d | ert-7 | 29 | | 7HS | Erectoides-d | 42: 82 | Gull |
| ert-e | dsp9 | 266 | | 6HL | Erectoides-e | 43:118 | Bonus |
| ert-f | ert-18 | 560 | | 1H | Erectoides-f | 40:133 | Bonus |
| ert-g | ert-g | 330 | | 1HL | Erectoides-g | 41:133 | Bonus |
| ert-h | ert-25 | 561 | | 5HL | Erectoides-h | 44:189 | Bonus |
| ert-ii | uzu1 | 135 | | 3HL | Erectoides-ii | 45:109 | Bonus |
| ert-j | ert-31 | 90 | | 2H | Erectoides-j | 43: 70 | Bonus |
| ert-k | ert-32 | 562 | | 6H | Erectoides-k | 43:156 | Bonus |
| ert-l | ert-12 | 563 | |  | Erectoides-l | 26:489 | Maja |
| ert-m | ert-34 | 30 | | 7HS | Erectoides-m | 44: 57 | Bonus |
| ert-n | ert-51 | 331 | | 5HL | Erectoides-n | 44:120 | Bonus |
| ert-p | ert-44 | 564 | |  | Erectoides-p | 26:490 | Bonus |
| ert-q | ert-101 | 91 | | 6H | Erectoides-q | 43: 71 | Bonus |
| Ert-r | Ert-52 | 332 | | 2HL | Erectoides-r | 41:135 | Bonus |
| ert-s | ert-50 | 565 | |  | Erectoides-s | 26:491 | Bonus |
| ert-t | brh3 | 566 | | 2HS | Erectoides-t | 45:203 | Bonus |
| ert-u | ari-o | 92 | | 7HL | Erectoides-u | 45:100 | Bonus |
| ert-v | ert-57 | 567 | | 6H | Erectoides-v | 41:188 | Bonus |
| ert-x | ert-58 | 568 | | 1H/7H | Erectoides-x | 40:136 | Bonus |
| ert-y | ert-69 | 569 | |  | Erectoides-y | 26:495 | Bonus |
| ert-z | ert-71 | 570 | |  | Erectoides-z | 26:496 | Bonus |
| ert-za | ert-102 | 571 | | 5H | Erectoides-za | 44:189 | Bonus |
| ert-zb | ert-132 | 572 | | 7HL | Erectoides-zb | 45:205 | Bonus |
| ert-zc | ert-149 | 573 | | 7HS | Erectoides-zc | 45:206 | Bonus |
| ert-zd | ari-o | 93 | | 7HL | Erectoides-zd | 45:102 | Bonus |
| ert-ze | ert-105 | 574 | | 5HS | Erectoides-ze | 45:207 | Bonus |
| fch1 | f, lg | 55 | | 2HS | Chlorina seedling 1 | 40: 49 | Minn 84-7 |
| fch2 | f2 | 117 | | 3HL | Chlorina seedling 2 | 26:151 | 28-3398 |
| fch3 | f3 | 220 | | 1HS | Chlorina seedling 3 | 40: 71 | Minn 89-4 |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS  no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| fch4 | f4 | 17 | | 7HL | Chlorina seedling 4 | 43: 54 | Montcalm |
| fch5 | f5 | 18 | | 7HS | Chlorina seedling 5 | 43: 56 | Gateway |
| fch6 | f6 | 313 | | 5HL | Chlorina seedling 6 | 44:116 | Himalaya |
| fch7 | f7 | 201 | | 1HL | Chlorina seedling 7 | 41:113 | Smyrna |
| fch8 | f8 | 5 | | 7HS | Chlorina seedling 8 | 41: 62 | Comfort |
| fch9 | f9 | 151 | | 4HS | Chlorina seedling 9 | 44: 92 | Ko A |
| fch10 |  | 177 | | 4H | Chlorina seedling 10 | 43: 95 | Unknown  cultivar |
| fch11 | f11 | 260 | | 6HL | Chlorina seedling 11 | 45:120 | Himalaya |
| fch12 | fc | 2 | | 7HS | Chlorina seedling 12 | 41:60 | Colsess |
| fch13 | f13 | 86 | | 5HL | Chlorina seedling 13 | 44: 77 | Nigrinudum |
| fch14 | f14 | 87 | | 2HL | Chlorina seedling 14 | 44: 78 | Shyri |
| fch15 | or | 52 | | 2HS | Chlorina seedling 15 | 40: 48 | Trebi IV |
| fch16 | clo.117 | 676 | | 2HS | Chlorina seedling 16 | 40:144 | Bonus |
| fch17 | vy | 191 | | 1H/3H | Chlorina seedling 17 | 40: 68 | Himalaya / Ingrescens |
| fer1 |  | 453 | |  | Few roots 1 | 44:162 | Bomi Abed |
| flo-a |  | 182 | | 6HL | Extra floret-a | 45:116 | Foma |
| flo-b | flo-a | 327 | | 6HL | Extra floret-b | 45:121 | Foma |
| flo-c | flo-a | 74 | | 6HL | Extra floret-c | 45: 97 | Foma |
| fol-a |  | 73 | | 2HL | Angustifolium-a | 43: 69 | Proctor |
| Fol-b | Ang | 548 | | 1HS | Angustifolium-b | 40:131 | Unknown |
| fst1 | fs | 301 | | 5HL | Fragile stem 1 | 26:252 | Kamairazu |
| fst2 | fs2 | 208 | | 1HL | Fragile stem 2 | 41:114 | Oshichi |
| fst3 | fs3 | 24 | | 7HS | Fragile stem 3 | 41: 74 | Kobinkatagi 4 |
| fxp1 |  | 728 | |  | Fenoxaprop-p-ethyl reaction 1 | 43:223 | Morex |
| gig1 | gig | 463 | | 2H | Gigas 1 | 44:164 | Tochigi Golden Melon |
| gig2 |  | 612 | | 4HL | Gigas 2 | 44:191 | ND12463 |
| glf1 | gl,cer-zh | 155 | | 4HL | Glossy leaf 1 ++ ++ - | 40: 61 | Himalaya |
| glf3 | gl3,cer-j | 165 | | 4HL | Glossy leaf 3 ++ ++ - | 43: 92 | Goseshikoku |
| glo-a |  | 168 | | 4H | Globosum-a | 45:115 | Proctor |
| glo-b |  | 336 | | 5HL | Globosum-b | 26:284 | Villa |
| glo-c | glo-c | 72 | | 2H | Globosum-c | 43: 68 | Villa |
| Table 3. (continued) | | | | | | | |
| Locus symbol\*  Rec. Prev. | | BGSno. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p | Parental cultivar |
|  |  |  | |  |  |  |  |
| glo-e |  | 230 | | 1HL | Globosum-e | 45: | Foma |
| glo-f |  | 342 | | 5HL | Globosum-f | 26:291 | Damazy |
| gpa1 | gp | 59 | | 2HL | Grandpa 1 | 45: 91 | Lyallpur |
| gra-a | gran-a | 131 | | 7H | Granum-a | 44: 88 | Donaria |
| gsh1 | gs1,  cer-q | 351 | | 2HS | Glossy sheath 1 - - ++ | 43:131 | PI 195285 |
| gsh2 | gs2 | 352 | | 3HL | Glossy sheath 2 - - ++ | 44:124 | Atlas |
| gsh3 | gs3 | 353 | | 7HS | Glossy sheath 3 - - ++ | 41:143 | Mars |
| gsh4 | gs4 | 354 | | 6HL | Glossy sheath 4 - - ++ | 41:146 | Gateway |
| gsh5 | gs5 | 355 | | 2HL | Glossy sheath 5 + - ++ | 44:126 | Jotun |
| gsh6 | cer-c, gs6 | 356 | | 2HS | Glossy sheath 6 - - ++ | 43:135 | Betzes |
| gsh7 | gs7 | 81 | | 1H/2H/5H | Glossy sheath 7 - - ++ | 40: 55 | Akashinriki |
| gsh8 | cer-u, gs8 | 413 | | 2HS | Glossy sheath 8 + + ++ | 43:141 | Akashinriki |
| Gth1 | G | 69 | | 2HL | Toothed lemma 1 | 44: 68 | Machine (Wexelsen) |
| hcm1 | h | 77 | | 2HL | Short culm 1 | 26:115 | Morex |
| Hln1 | Hn | 164 | | 4HL | Hairs on lemma nerves 1 | 44: 99 | Kogane-mugi |
| Hsh1 | Hs | 179 | | 4HL | Hairy leaf sheath 1 | 44:107 | Kimugi |
| ibl1 | ibl1 | 716 | |  | Intense blue aleurone 1 | 45:241 | Ethiopian 637 |
| int-b |  | 320 | | 5HL | Intermedium spike-b | 44:118 | Bonus |
| int-c | i | 178 | | 4HS | Intermedium spike-c | 37:237 | Gamma 4 |
| int-f |  | 543 | | 2HS/  3HL | Intermedium spike-f | 44:178 | Foma |
| int-h |  | 544 | | 5H | Intermedium spike-h | 44:179 | Kristina |
| int-i |  | 545 | | 2HS | Intermedium spike-i | 41:181 | Kristina |
| int-k |  | 546 | | 7H | Intermedium spike-k | 44:180 | Kristina |
| int-m |  | 547 | | 5HL | Intermedium spike-m | 44:181 | Bonus |
| Kap1 | K | 152 | | 4HS | Hooded lemma 1 | 26:179 | Colsess |
| lab1 |  | 730 | | 5HL | Labile 1 | 45:242 |  |
| lam1 |  | 651 | |  | Late maturity 1 | 43:174 | Steptoe |
| lax-a |  | 474 | | 5HL | Laxatum-a | 40:120 | Bonus |
| lax-b |  | 268 | | 6HL | Laxatum-b | 44:113 | Bonus |
| lax-c |  | 475 | | 6HL | Laxatum-c | 41:174 | Bonus |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGSno. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| lbi1 | lb | 308 | | 5HL | Long basal rachis internode 1 | 43:125 | Wisconsin Pedigree 38 |
| lbi2 | lb2 | 156 | | 4HS | Long basal rachis internode 2 | 44: 92 | Montcalm |
| lbi3 | lb3 | 27 | | 7HL | Long basal rachis internode 3 | 42: 79 | Montcalm |
| lel1 | lel | 235 | | 1HL | Leafy lemma 1 | 32:103 | G7118 |
| Lfb1 | Lfb | 343 | | 5HL | Leafy bract 1 | 41:140 | Montcalm |
| Lga1 | Log | 549 | | 7HS | Long glume awn 1 | 44:183 | Guy Mayle |
| lgn2 | lg2 | 169 | | 4HS | Light green 2 | 42:264 | Minn 75 |
| lgn3 | lg3 | 170 | | 1HL | Light green 3 | 44:103 | No 154 |
| lgn4 | lg4 | 171 | | 4HL | Light green 4 | 44:105 | Himalaya / Ingrescens |
| lig1 | li, aur-a | 60 | | 2HL | Liguleless 1 | 45: 93 | Muyoji |
| lin1 | s, rin | 99 | | 2HS | Lesser internode number 1 | 41: 92 | Natural occurrence |
| Lks1 | Lk | 75 | | 2HL | Awnless 1 | 41: 84 | *Hordeum inerme* |
| lks2 | lk2 | 10 | | 7HL | Short awn 2 | 45: 80 | Honen 6 |
| lks5 | lk5 | 172 | | 4HL | Short awn 5 | 41:110 | CIho 5641 |
| lks6 | lks.q | 724 | | 1H/5H/ 6H | Short awn 6 | 43:219 | Morex |
| lnt1 | rnt | 118 | | 3HL | Low number of tillers 1 | 43: 82 | Mitake |
| lys1 | lys | 338 | | 5HL | High lysine 1 | 26:286 | Hiproly |
| lys3 | sex3 | 339 | | 5HL | High lysine 3 | 43:127 | Bomi Abed |
| Lys4 | sex5 | 232 | | 1HS | High lysine 4 | 26:230 | Bomi Abed |
| lys6 |  | 269 | | 6H | High lysine 6 | 44:114 | Bomi Abed |
| lzd1 | dw4 | 125 | | 3H | Lazy dwarf 1 | 43: 87 | Akashinriki |
| mat-b |  | 578 | |  | Praematurum-b | 26:504 | Bonus |
| mat-c |  | 579 | |  | Praematurum-c | 26:506 | Bonus |
| mat-d |  | 580 | | 4HL/  6HL | Praematurum-d | 45:208 | Bonus |
| mat-e |  | 581 | |  | Praematurum-e | 26:508 | Bonus |
| mat-f |  | 582 | | 1H | Praematurum-f | 45:210 | Bonus |
| mat-g |  | 583 | |  | Praematurum-g | 26:510 | Bonus |
| mat-h |  | 584 | | 4HL | Praematurum-h | 45:212 | Bonus |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| mat-i |  | 585 | | 7HL | Praematurum-i | 45:214 | Bonus |
| min1 | min | 161 | | 4HL | Semi-minute dwarf 1 | 44: 97 | Taisho-mugi |
| min2 | en-min | 160 | |  | Enhancer of minute 1 | 26:186 | Kaiyo Bozu |
| mnd1 | m | 519 | | 2H | Many noded dwarf 1 | 43:154 | Mesa |
| mnd3 | m3 | 618 | | 4HS | Many noded dwarf 3 | 44:194 | Montcalm |
| mnd4 | m4 | 347 | | 5HL | Many noded dwarf 4 | 44:122 | Akashinriki |
| mnd5 |  | 632 | | 7HL | Many noded dwarf 5 | 44:202 | C2-95-199 |
| mnd6 | den-6 | 633 | | 5HL | Many noded dwarf 6 | 44:203 | Bonus |
| mnd7 |  | 726 | |  | Many noded dwarf 7 | 43:221 | Steptoe |
| mov1 | mo5 | 43 | | 7HL | Multiovary 1 | 43: 59 | Steptoe |
| mov2 | mo | 147 | | 3HS | Multiovary 2 | 43: 91 | Steptoe |
| mov3 | mo-a | 234 | | 1H | Multiovary 3 | 32:102 | Akashinriki |
| mov4 | mo8 | 648 | |  | Multiovary 4 | 43:171 | Steptoe |
| mov5 | mov.o | 723 | |  | Multiovary 5 | 43:218 | Morex |
| msg1 | ms, ms1 | 357 | | 1HL | Male sterile genetic 1 | 45:126 | CIho 5368 |
| msg2 | ms2 | 358 | | 2HL | Male sterile genetic 2 | 45:128 | Manchuria |
| msg3 | ms3 | 359 | | 1HL | Male sterile genetic 3 | 45:130 | Gateway |
| msg4 | ms4 | 360 | | 1H | Male sterile genetic 4 | 45:132 | Freja |
| msg5 | ms5 | 361 | | 3HS | Male sterile genetic 5 | 45:133 | Carlsberg II |
| msg6 | ms6 | 362 | | 6HS | Male sterile genetic 6 | 45:135 | Hanna |
| msg7 | ms7 | 363 | | 5HL | Male sterile genetic 7 | 45:137 | Dekap |
| msg8 | ms8 | 364 | | 5HL | Male sterile genetic 8 | 45:139 | Betzes |
| msg9 | ms9 | 365 | | 2HS | Male sterile genetic 9 | 45:141 | Vantage |
| msg10 | ms10 | 366 | | 7HS | Male sterile genetic 10 | 45:142 | Compana |
| msg11 | ms11 | 367 | | 5HS | Male sterile genetic 11 | 45:144 | Gateway |
| msg13 | ms13 | 368 | | 3HL | Male sterile genetic 13 | 45:146 | Haisa II |
| msg14 | ms14 | 369 | | 7HS | Male sterile genetic 14 | 45:147 | Unitan |
| msg15 | ms15 | 370 | |  | Male sterile genetic 15 | 45:149 | Atlas/2\*Kindred |
| msg16 | ms16 | 371 | | 5HS | Male sterile genetic 16 | 45:150 | Betzes |
| msg17 | ms17 | 372 | | 5HL | Male sterile genetic 17 | 45:152 | Compana |
| msg18 | ms18 | 373 | | 5HL | Male sterile genetic 18 | 45:153 | Compana |
| msg19 | ms19 | 374 | | 5HS | Male sterile genetic 19 | 45;155 | CIho 14393 |
| msg20 | msg,,ad | 375 | | 4H | Male sterile genetic 20 | 45:156 | Hannchen |
| msg21 | ms21 | 376 | | 1HL | Male sterile genetic 21 | 45:157 | Midwest Bulk |
| Table 3. (continued) | | | |  |  |  |  |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
| Rec. | Prev. |
|  |  |  | |  |  |  |  |
| msg22 | ms22 | 383 | | 7H | Male sterile genetic 22 | 45:162 | Glacier / Compana |
| msg23 | ms23 | 384 | | 5H | Male sterile genetic 23 | 45:163 | Betzes |
| msg24 | ms24 | 385 | | 4HL | Male sterile genetic 24 | 45:164 | Betzes |
| msg25 | msg,,r | 166 | | 2HS | Male sterile genetic 25 | 45:113 | Betzes |
| msg26 | msg,,u | 395 | | 7HS | Male sterile genetic 26 | 45:166 | Unitan |
| msg27 | msg,,ae | 464 | | 2HS | Male sterile genetic 27 | 45:174 | Firlbecks III |
| msg28 | msg,,as | 465 | | 2HS | Male sterile genetic 28 | 45:175 | York |
| msg29 | msg,,a | 466 | | 5HL | Male sterile genetic 29 | 45:176 | Ackermans MGZ |
| msg30 | msg,,c | 467 | | 7HL | Male sterile genetic 30 | 45:177 | Compana |
| msg31 | msg,,d | 468 | | 1HL | Male sterile genetic 31 | 45:178 | 51Ab4834 |
| msg32 | msg,,w | 469 | | 7H | Male sterile genetic 32 | 45:179 | Betzes |
| msg33 | msg,,x | 470 | | 2HS | Male sterile genetic 33 | 45:180 | Betzes |
| msg34 | msg,,av | 471 | | 6HS/  7HS | Male sterile genetic 34 | 45:181 | Paragon |
| msg35 | msg,,dr | 498 | | 2HL | Male sterile genetic 35 | 45:183 | Karl |
| msg36 | msg,,bk | 499 | | 6HS | Male sterile genetic 36 | 45:184 | Betzes |
| msg37 | msg,,hl | 500 | | 3HL | Male sterile genetic 37 | 45:186 | Clermont |
| msg38 | msg,,jl | 501 | | 3H | Male sterile genetic 38 | 45:187 | Ingrid |
| msg39 | msg,,dm | 502 | | 3H | Male sterile genetic 39 | 45:188 | P11 |
| msg40 | msg,,ac | 503 | | 6HL | Male sterile genetic 40 | 45:190 | Conquest |
| msg41 | msg,,aj | 504 | | 6HS | Male sterile genetic 41 | 45:191 | Betzes |
| msg42 | msg,,db | 505 | | 3H | Male sterile genetic 42 | 45:193 | Betzes |
| msg43 | msg,,br | 506 | | 2HL | Male sterile genetic 43 | 45:194 | Betzes |
| msg44 | msg,,cx | 507 | | 5HL | Male sterile genetic 44 | 45:195 | HA6-33-02 |
| msg45 | msg,,dp | 508 | | 5HL/  7HS | Male sterile genetic 45 | 45:196 | RPB439-71 |
| msg46 | msg,,ec | 509 | | 2H/6H | Male sterile genetic 46 | 45:197 | Hector |
| msg47 | msg,,ep | 510 | | 3HS/  7HS | Male sterile genetic 47 | 45:198 | Sel12384CO |
| msg48 | msg,,jt | 520 | | 1H | Male sterile genetic 48 | 45:199 | Simba |
| msg49 | msg,,jw | 335 | | 5HL | Male sterile genetic 49 | 45:122 | ND7369 |
| msg50 | msg,,hm | 34 | | 7HL | Male sterile genetic 50 | 45: 88 | Berac |
| mss1 | mss | 84 | | 5H | Midseason stripe 1 | 44: 75 | Montcalm |
| Table 3. (continued) | | | |  |  |  |  | |
| Locus symbol\* | | | BGSno. | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. | |
|  |  | |  |  |  |  |  | |
| mss2 |  | | 39 | 7HS | Midseason stripe 2 | 44: 59 | ND11258 | |
| mtt1 | mt | | 521 | 1HS | Mottled leaf 1 | 41:179 | Montcalm | |
| mtt2 | mt2 | | 302 | 5HL | Mottled leaf 2 | 41:127 | Montcalm | |
| mtt4 | mt,,e | | 78 | 2HL | Mottled leaf 4 | 41: 86 | Victorie | |
| mtt5 | mt,,f | | 264 | 6HL | Mottled leaf 5 | 41:126 | Akashinriki | |
| mtt6 |  | | 629 | 7HS | Mottled leaf 6 | 45:228 | ND6809 | |
| mtt7 | mtt.h | | 677 | 2HS | Mottled leaf 7 | 42:753 | Morex | |
| mtt8 | Mut 1661 | | 674 |  | Mottled leaf 8 | 43:182 | Bowman Rph3.c | |
| mtt9 | Mut 2721 | | 675 |  | Mottled leaf 9 | 44:207 | Bowman Rph3.c | |
| mul2 |  | | 251 | 6HL | Multiflorus 2 | 26:232 | Montcalm | |
| nar1 |  | | 637 | 6HS | NADH nitrate reductase-deficient 1 | 35:194 | Steptoe | |
| nar2 |  | | 638 | 5HL | NADH nitrate reductase-deficient 2 | 35:196 | Steptoe | |
| nar3 |  | | 639 | 7HS | NADH nitrate reductase-deficient 3 | 35:197 | Winer | |
| nar4 |  | | 640 | 2HL | NADH nitrate reductase-deficient 4 | 35:198 | Steptoe | |
| nar5 |  | | 641 | 5HL | NADH nitrate reductase-deficient 5 | 35:199 | Steptoe | |
| nar6 |  | | 642 | 2HL | NADH nitrate reductase-deficient 6 | 35:200 | Steptoe | |
| nar7 |  | | 643 | 6HL | NADH nitrate reductase-deficient 7 | 35:201 | Steptoe | |
| nar8 |  | | 644 | 6HS | NADH nitrate reductase-deficient 8 | 35:202 | Steptoe | |
| nec1 | sp,,b | | 222 | 1HL | Necrotic leaf spot 1 | 43:108 | Carlsberg II | |
| nec2 | nec2 | | 261 | 6HS | Necrotic leaf spot 2 | 26:241 | Carlsberg II | |
| nec3 | nec3 | | 265 | 6HS | Necrotic leaf spot 3 | 43:116 | Proctor | |
| nec4 | nec4 | | 138 | 3H | Necrotic leaf spot 4 | 43: 88 | Proctor | |
| nec5 | nec5 | | 139 | 3H | Necrotic leaf spot 5 | 43: 89 | Diamant | |
| Nec6 | Sp | | 611 | 7HS | Necrotic leaf spot 6 | 43:159 | Awnless Atlas | |
| nec7 | nec-45 | | 635 | 1H/6H/7H | Necroticans 7 | 43:166 | Kristina | |
| nec8 | nec.w | | 671 | 5HL | Necrotic leaf spot 8 | 43:179 | Bowman Rph3.c | |
| nec9 | Mut 3091 | | 672 | 3HL | Necrotic leaf spot 9 | 43:181 | Bowman Rph3.c | |
| nec10 | necS 1-1 | | 681 | 3H | Necroticans 10 | 43:184 | Steptoe | |
| Table 3. (continued) | | | |  |  |  |  | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| nec11 |  | | 682 | 1H | Necroticans 11 | 43:185 | Steptoe | |
| nec12 |  | | 683 |  | Necroticans 12 | 43:186 | Steptoe | |
| nec13 |  | | 684 |  | Necroticans 13 | 43:187 | Steptoe | |
| nec14 |  | | 685 |  | Necroticans 14 | 43:188 | Steptoe | |
| nec15 |  | | 686 |  | Necroticans 15 | 43:189 | Steptoe | |
| nec16t |  | | 687 |  | Necroticans 16 | 43:190 | Steptoe | |
| nec17 |  | | 688 |  | Necroticans 17 | 43:191 | Steptoe | |
| nec18 |  | | 689 |  | Necroticans 18 | 43:192 | Steptoe | |
| nec19 |  | | 690 |  | Necroticans 19 | 43:193 | Steptoe | |
| nec20 |  | | 691 |  | Necroticans 20 | 43:194 | Steptoe | |
| nec21 |  | | 692 |  | Necroticans 21 | 43:195 | Steptoe | |
| Nec22 |  | | 693 |  | Necroticans 22 | 43:196 | Steptoe | |
| nec23 |  | | 694 |  | Necroticans 23 | 43:197 | Steptoe | |
| Nec24 |  | | 695 |  | Necroticans 24 | 43:198 | Steptoe | |
| nec25 |  | 696 | |  | Necroticans 25 | 43:199 | Steptoe | |
| Nec26 |  | 697 | |  | Necroticans 26 | 43:200 | Steptoe | |
| nec27 |  | 698 | |  | Necroticans 27 | 43:201 | Steptoe | |
| nec28 |  | 699 | |  | Necroticans 28 | 43:202 | Morex | |
| nec29 |  | 700 | |  | Necroticans 29 | 43:203 | Morex | |
| nec30 |  | 701 | |  | Necroticans 30 | 43:204 | Morex | |
| nec31 |  | 702 | |  | Necroticans 31 | 43:205 | Morex | |
| nec32 |  | 703 | |  | Necroticans 32 | 43:206 | Morex | |
| nec33 |  | 704 | |  | Necroticans 33 | 43:207 | CIho 4196 | |
| nec34 | nec.k | 197 | | 4HS | Necroticans 34 | 43:104 | ND13917 | |
| nld1 | nld | 323 | | 5HL | Narrow leafed dwarf 1 | 26:271 | Nagaoka | |
| nld2 |  | 660 | | 5H/6H/ 7H | Narrow leafed dwarf 2 | 43:176 | Steptoe | |
| nud1 | n, nud | 7 | | 7HL | Naked caryopsis 1 | 44: 51 | Himalaya | |
| ops1 | op-3 | 624 | | 7HS | Opposite spikelets 1 | 45:226 | Bonus | |
| ops2 | op-2 | 718 | | 5HL | Opposite spikelets 2 | 43:213 | Foma | |
| ops3 | op-1 | 719 | | 5HS | Opposite spikelets 3 | 43:214 | Bonus | |
| ovl1 |  | 176 | | 4H | Ovaryless 1 | 35:191 | Kanto Bansei Gold | |
| ovl2 | ovl2 | 646 | |  | Ovaryless 2 | 43:169 | Harrington | |
| ovl3 |  | 725 | |  | Ovaryless 3 | 43:220 | Harrington | |
| Table 3. (continued) | | | |  |  |  |  | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| pmr1 | pmr | 40 | | 7HS | Premature ripe 1 | 44: 60 | Glenn | |
| pmr2 | nec-50 | 634 | |  | Premature ripe 2 | 32:135 | Bonus | |
| Pre2 | Re2 | 76 | | 2HL | Red lemma and pericarp 2 | 44: 70 | Buckley 3277 | |
| Pub1 | Pub | 127 | | 3HL | Pubescent leaf blade 1 | 44: 84 | Multiple Dominant | |
| Pvc1 | Pc | 68 | | 2HL | Purple veined lemma 1 | 44: 67 | Buckley 2223-6 | |
| Pyr1 | Pyr.g | 42 | | 3HL | Pyramidatum 1 | 41: 78 | Pokko/Hja80001 | |
| raw1 | r | 312 | | 5HL | Smooth awn 1 | 26:261 | Lion | |
| raw2 | r2 | 340 | | 5HL | Smooth awn 2 | 26:289 | Lion | |
| raw5 | r,,e | 257 | | 6HL | Smooth awn 5 | 44:112 | Akashinriki | |
| raw6 | r6 | 334 | | 5HL | Smooth awn 6 | 26:282 | Glenn | |
| rcr1 | γ08-122 | 737 | |  | Required for resistance to *Cochliobolus sativus* 1 | 45:249 | Morex | |
| rcr2 | γ08-123 | 738 | |  | Required for resistance to *Cochliobolus sativus* 2 | 45:250 | Morex | |
| rcr3 | γ08-124 | 739 | |  | Required for resistance to *Cochliobolus sativus* 3 | 45:251 | Morex | |
| rob1 | o | 254 | | 6HS | Orange lemma 1 | 37:255 | CIho 5649 | |
| Rpc1 |  | 149 | | 3H | Reaction to *Puccinia coronata* var. *hordei* 1 | 37:232 | Hor 2596 | |
| Rpg1 | T | 511 | | 7HS | Reaction to *Puccinia* *graminis* 1 | 26:437 | Chevron | |
| Rpg2 | T2 | 512 | |  | Reaction to *Puccinia graminis* 2 | 26:439 | Hietpas 5 | |
| rpg4 |  | 319 | | 5HL | Reaction to *Puccinia* *graminis* 4 | 26:267 | Q21861 | |
| Rph1 | Pa | 70 | | 2H | Reaction to *Puccinia hordei* 1 | 26:107 | Oderbrucker | |
| Rph2 | Pa2 | 88 | | 5HS | Reaction to *Puccinia hordei* 2 | 37:212 | Peruvian | |
| Rph3 | Pa3 | 121 | | 7HL | Reaction to *Puccinia hordei* 3 | 26:156 | Estate | |
| Rph4 | Pa4 | 218 | | 1HS | Reaction to *Puccinia hordei* 4 | 42:302 | Gull | |
| Rph5 | Pa5 | 122 | | 3HS | Reaction to *Puccinia hordei* 5 | 37:224 | Magnif 102 | |
| Rph6 | Pa6 | 575 | | 3HS | Reaction to *Puccinia hordei* 6 | 26:501 | Bolivia | |
| Table 3. (continued) | | | | | | | | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| Rph7 | Pa7 | 136 | | 3HS | Reaction to *Puccinia hordei* 7 | 37:228 | Cebada Capa | |
| Rph8 | Pa8 | 576 | |  | Reaction to *Puccinia hordei* 8 | 26:502 | Egypt 4 | |
| Rph9 | Pa9 | 32 | | 5HL | Reaction to *Puccinia hordei* 9 | 37:201 | HOR 2596 | |
| Rph10 |  | 137 | | 3HL | Reaction to *Puccinia hordei* 10 | 26:174 | Clipper C8 | |
| Rph11 |  | 267 | | 6HL | Reaction to *Puccinia hordei* 11 | 26:247 | Clipper C67 | |
| Rph12 |  | 333 | | 5HL | Reaction to *Puccinia hordei* 12 | 26:281 | Triumph | |
| Rph13 |  | 590 | |  | Reaction to *Puccinia hordei* 13 | 28: 31 | PI 531849 | |
| Rph14 |  | 591 | |  | Reaction to *Puccinia hordei* 14 | 28: 32 | PI 584760 | |
| Rph15 | Rph16 | 96 | | 2HL | Reaction to *Puccinia hordei* 15 | 37:214 | PI 355447 | |
| rpr1 |  | 707 | | 4H | Required for *Puccinia graminis* resistance 1 | 42:757 | Morex | |
| rpr2 | γ08-118 | 731 | | 6H | Required for *Puccinia graminis* resistance 2 | 45:243 | Morex | |
| rpr3 | γ08-112 | 732 | |  | Required for *Puccinia graminis* resistance 3 | 45:244 | Morex | |
| rpr4 | γ08-114 | 733 | |  | Required for *Puccinia graminis* resistance 4 | 45:245 | Morex | |
| rpr5 | γ08-117 | 734 | |  | Required for *Puccinia graminis* resistance 5 | 45:246 | Morex | |
| rpr6 | γ08-119 | 735 | |  | Required for *Puccinia graminis* resistance 6 | 45:247 | Morex | |
| rpr7 | γ08-115 | 736 | |  | Required for *Puccinia graminis* resistance 7 | 45:248 | Morex | |
| Rpt1 | Pt | 667 | | 3HL | Reaction to *Pyrenophora* *teres* 1 | 43:177 | Tifang | |
| Rpt2 | Rpt2c | 237 | | 1HS | Reaction to *Pyrenophora* *teres* 2 | 43:110 | CIho 9819 | |
| Rpt3 | QRptts2 | 711 | | 2HS | Reaction to *Pyrenophora* *teres* 3 | 43:208 | Tennessee Awnless D22-5 | |
| Rpt4 | QRpt7 | 48 | | 7HL | Reaction to *Pyrenophora* *teres* 4 | 43: 61 | Galleon | |
| Table 3. (continued) | | | |  |  |  |  | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| Rpt5 | Rpta | 272 | | 6HL | Reaction to *Pyrenophora* *teres* 5 | 43:120 | CIho 5791, CIho 9819 | |
| Rpt6 |  | 713 | | 5HL | Reaction to *Pyrenophora* *teres* 6 | 43:210 | CIho 9819 | |
| Rpt7 | Qrpts4 | 714 | | 4HL | Reaction to *Pyrenophora* *teres* 7 | 43:211 | Halcyon | |
| Rpt8 | QRpts4 | 198 | | 4HS | Reaction to *Pyrenophora* *teres* 8 | 43:105 | Q21861 | |
| Rsg1 | Grb | 22 | | 7H | Reaction to *Schizaphis graminum* 1 | 37:199 | Omugi | |
| Rsg2 |  | 577 | |  | Reaction to *Schizaphis* *graminum* 2 | 37:283 | PI 426756 | |
| rsm1 | sm | 35 | | 7HS | Reaction to BSMV 1 | 26: 84 | Modjo 1 | |
| Rsp1 | Sep | 515 | |  | Reaction to *Septoria passerinii* 1 | 26:441 | CIho 14300 | |
| Rsp2 | Sep2 | 516 | |  | Reaction to *Septoria passerinii* 2 | 37:275 | PI 70837 | |
| Rsp3 | Sep3 | 517 | |  | Reaction to *Septoria passerinii* 3 | 37:276 | CIho 10644 | |
| rtt1 | rt | 51 | | 2HS | Rattail spike 1 | 26: 87 | Goldfoil | |
| Run1 | Un | 21 | | 7HS | Reaction to *Ustilago nuda* 1 | 26: 67 | Trebi | |
| rvl1 | rvl | 226 | | 1HL | Revoluted leaf 1 | 40: 77 | Hakata 2 | |
| Ryd2 | Yd2 | 123 | | 3HL | Reaction to BYDV 2 | 26:158 | CIho 2376 | |
| Rym1 | Ym | 167 | | 4HL | Reaction to BaYMV 1 | 32: 96 | Mokusekko 3 | |
| Rym2 | Ym2 | 20 | | 7HL | Reaction to BaYMV 2 | 26: 66 | Mihori Hadaka 3 | |
| rym3 | ym3 | 345 | | 5HS | Reaction to BaYMV 3 | 32:105 | Chikurin Ibaraki | |
| rym5 | Ym | 141 | | 3HL | Reaction to BaYMV 5 | 32: 90 | Mokusekko 3 | |
| sbk1 | sk, cal-a | 62 | | 2HS | Subjacent hood 1 | 40: 51 | Tayeh 13 | |
| sca1 | sca | 128 | | 3HS | Short crooked awn 1 | 44: 85 | Akashinriki | |
| sci-a | sci-3 | 625 | | 5H | Scirpoides-a | 44:200 | Bonus | |
| sci-b | sci-4 | 239 | | 1H/6H | Scirpoides-b | 40: 83 | Bonus | |
| scl-a | scl-6 | 626 | | 1HL | Scirpoides leaf-a | 44:201 | Foma | |
| scl-b | scl.5 | 150 | | 3H/6H | Scirpoides leaf-b | 40: 60 | Bonus | |
| sdw1 | sdw | 518 | | 3HL | Semidwarf 1 | 41:176 | M21 | |
| sdw2 | sdw-b | 133 | | 3HL | Semidwarf 2 | 45:108 | Mg2170 | |
| sdw4 |  | 45 | | 7HL | Semidwarf 4 | 41: 80 |  | |
| sdw6 | sdw.f | 240 | | 1H/7H | Semidwarf 6 | 40: 84 | Vada | |
| Table 3. (continued) | | | | |  |  |  | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| sdw7 | sdw.u | 196 | | 4HL | Semidwarf 7 | 43:103 | Glenn | |
| seg1 | se1 | 377 | | 7HL | Shrunken endosperm genetic 1 | 45:158 | Betzes | |
| seg2 | se2 | 378 | | 7HS | Shrunken endosperm genetic 2 | 26:326 | Betzes | |
| seg3 | se3 | 379 | | 3H | Shrunken endosperm genetic 3 | 45:160 | Compana | |
| seg4 | se4 | 380 | | 7HL | Shrunken endosperm genetic 4 | 37:267 | Compana | |
| seg5 | se5 | 381 | | 7HS | Shrunken endosperm genetic 5 | 26:329 | Sermo / 7\*Glacier | |
| seg6 | se6 | 396 | | 3HL | Shrunken endosperm genetic 6 | 44:138 | Ingrid | |
| seg7 | se7 | 397 | |  | Shrunken endosperm genetic 7 | 37:269 | Ingrid | |
| seg8 | seg8 | 455 | | 7H | Shrunken endosperm genetic 8 | 45:170 | 60Ab1810-53 | |
| sex1 | lys5 | 382 | | 6HL | Shrunken endosperm xenia 1 | 26:330 | Compana | |
| sex6 | ssIIa | 31 | | 7HS | Shrunken endosperm xenia 6 | 45: 86 | K6827 | |
| sex7 | sex.i | 628 | | 5HL | Shrunken endosperm xenia 7 | 32:129 | I90-374 | |
| sex8 | sex.j | 143 | | 3HS | Shrunken endosperm xenia 8 | 43: 90 | I89-633-1 | |
| sex9 | sex.1 | 195 | | 4HL | Shrunken endosperm xenia 9 | 43:102 | Alf | |
| sgh1 | sh1 | 163 | | 4HL | Spring growth habit 1 | 26:188 | Iwate Mensury C | |
| Sgh2 | Sh2 | 309 | | 5HL | Spring growth habit 2 | 26:259 | Indian Barley | |
| Sgh3 | Sh3 | 213 | | 1HL | Spring growth habit 3 | 26:212 | Tammi / Hayakiso 2 | |
| sid1 | nls | 180 | | 4HL | Single internode dwarf 1 | 43: 97 | Akashinriki | |
| Sil1 | Sil | 228 | | 1H | Subcrown internode length 1 | 40: 79 | NE 62203 | |
| sld1 | dw-1 | 126 | | 3HL | Slender dwarf 1 | 41:103 | Akashinriki | |
| sld2 |  | 83 | | 2HS | Slender dwarf 2 | 44: 74 | Akashinriki | |
| sld3 | ant-567 | 186 | | 4HS | Slender dwarf 3 | 40: 63 | Manker | |
| sld4 | sld.d | 100 | | 2HS | Slender dwarf 4 | 43: 72 | Glacier | |
| Table 3. (continued) | | | |  |  |  |  | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| sld5 |  | 144 | | 3HS | Slender dwarf 5 | 44: 90 | Indian Dwarf | |
| sld6 | sld.gs | 242 | | 1H | Slender dwarf 6 | 40: 87 | Glenn | |
| sld7 | sld.f | 194 | | 4HL | Slender dwarf 7 | 43:101 | Glenn | |
| sld8 | sld.i | 49 | | 7HS/  4HL | Slender dwarf 8 | 43: 63 | Wisconsin Pedigree 38 | |
| sls1 | sls | 227 | | 1HS | Small lateral spikelet 1 | 40: 78 | Morex | |
| smn1 | smn | 38 | | 3H/5H | Seminudoides 1 | 43: 58 | Haisa | |
| snb1 | sb | 26 | | 7HS | Subnodal bract 1 | 26: 72 | L50-200 | |
| srh1 | s | 321 | | 5HL | Short rachilla hair 1 | 26:269 | Lion | |
| sun1 | sun1 | 650 | |  | Sensitivity to *Ustilago nuda* 1 | 43:173 | Steptoe | |
| tfm1 |  | 190 | | 1HL | Thick filament 1 | 40: 67 | Volla | |
| trd1 | trd | 202 | | 1HL | Third outer glume 1 | 26:207 | Valki | |
| trp1 | tr | 61 | | 4HL | Triple awned lemma 1 | 41: 82 | CIho 6630 | |
| tst1 | tst1 | 647 | | 6HL | Tip sterile 1 | 43:170 | Steptoe | |
| tst2 |  | 636 | | 4HL | Tip sterile 2 | 43:167 | Donaria | |
| ubs4 | lks2, ari-d | 11 | | 7HL | Unbranched style 4 | 45: 84 | Ao-Hadaka | |
| ubs5 |  | 727 | |  | Unbranched style 5 | 43:222 | Harrington | |
| uzu1 | uz | 102 | | 2HL | Uzu 1 or semi brachytic 1 | 45:104 | Baitori | |
| var1 | va | 306 | | 5HL | Variegated 1 | 37:259 | Montcalm | |
| var2 | va2 | 344 | | 5HL | Variegated 2 | 32:104 | Montcalm | |
| var3 | va3 | 303 | | 5HL | Variegated 3 | 44:115 | Montcalm | |
| viv-a | viv-5 | 627 | | 2H | Viviparoides-a | 45:227 | Foma | |
| viv-b | viv-6 | 193 | | 4HS | Viviparoides-b | 43:100 | Foma | |
| viv-c | viv-1 | 720 | | 5H | Viviparoides-c | 43:215 | Foma | |
| vrs1 | v | 6 | | 2HL | Six-rowed spike 1 | 37:192 | Trebi | |
| vrs1 | lr | 58 | | 2HL | Six-rowed spike 1 | 26: 94 | Nudihaxtoni | |
| vrs1 | Vd | 66 | | 2HL | Two-rowed spike 1 | 26:103 | Svanhals | |
| vrs1 | Vt | 67 | | 2HL | Deficiens 1 | 26:104 | White Deficiens | |
| vrs2 | v2 | 314 | | 5HL | Six-rowed spike 2 | 26:263 | Svanhals | |
| vrs3 | v3 | 315 | | 1HL | Six-rowed spike 3 | 40: 90 | Hadata 2 | |
| vrs4 | v4 | 124 | | 3HL | Six-rowed spike 4 | 41:101 | MFB 104 | |
| wax1 | wx | 16 | | 7HS | Waxy endosperm 1 | 42: 65 | Oderbrucker | |
| wnd1 | wnd | 23 | | 4Hl | Winding dwarf 1 | 42: 74 | Kogen-mugi | |
| Table 3. (continued) | | | | | | | | |
| Locus symbol\* | | BGS no. | | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar | |
| Rec. | Prev. |
|  |  |  | |  |  |  |  | |
| wst1 | wst | 107 | | 3HL | White streak 1 | 41: 97 | CIho 11767 | |
| wst2 |  | 304 | | 5HL | White streak 2 | 26:255 | Manabe | |
| wst4 |  | 56 | | 2HL | White streak 4 | 44: 51 | Kanyo 7 | |
| wst5 |  | 221 | | 1HL | White streak 5 | 26:219 | Carlsberg II | |
| wst6 | wst,,j | 129 | | 3HL | White streak 6 | 41:105 | Akashinriki | |
| wst7 | rb | 79 | | 2HL | White streak 7 | 41: 87 | GS397 | |
| wxs1 | wxs | 615 | | 7H/ 2HL | Waxy spike 1 | 43:160 | Steptoe | |
| Xnt1 | Xa | 25 | | 7HL | Xantha seedling 1 | 26: 71 | Akashinriki | |
| xnt2 | xb | 513 | |  | Xantha seedling 2 | 26:440 | Black Hulless | |
| xnt3 | xc | 105 | | 3HS | Xantha seedling 3 | 26:139 | Colsess | |
| xnt4 | xc2 | 36 | | 7HL | Xantha seedling 4 | 26: 85 | Coast | |
| xnt5 | xn | 255 | | 6HL | Xantha seedling 5 | 26:237 | Nepal | |
| xnt6 | xs | 113 | | 3HS | Xantha seedling 6 | 26:147 | Smyrna | |
| xnt7 | xan,,g | 233 | | 1HL | Xantha seedling 7 | 26:231 | Erbet | |
| xnt8 | xan,,h | 140 | | 3HS | Xantha seedling 8 | 26:177 | Carlsberg II | |
| xnt9 | xan,,i | 37 | | 7HL | Xantha seedling 9 | 26: 86 | Erbet | |
| yhd1 | yh | 158 | | 4HL | Yellow head 1 | 42:250 | Kimugi | |
| yhd2 | yh2 | 592 | |  | Yellow head 2 | 45:215 | Compana | |
| ylf1 | ylf1 | 652 | | 7HS | Yellow leaf 1 | 43:175 | Villa | |
| Ynd1 | Yn | 183 | | 4HS | Yellow node 1 | 44:109 | Morex | |
| yst1 | yst | 104 | | 3HS | Yellow streak 1 | 42:178 | Gateway | |
| yst2 |  | 109 | | 3HS | Yellow streak 2 | 44: 81 | Kuromugi 148 / Mensury C | |
| yst3 | yst,,c | 462 | | 3HS | Yellow streak 3 | 44:163 | Lion | |
| yst4 |  | 85 | | 2HL | Yellow streak 4 | 44: 76 | Glenn | |
| yst5 | yst5 | 346 | | 7HS | Yellow streak 5 | 43:130 | Bowman / ant10.30 | |
| yvs1 | yx | 63 | | 2HS | Virescent seedling 1 | 26: 99 | Minn 71-8 | |
| yvs2 | yc | 3 | | 7HS | Virescent seedling 2 | 26: 46 | Coast | |
| zeb1 | zb | 120 | | 3HL | Zebra stripe 1 | 43: 86 | Mars | |
| zeb2 | zb2, fch10 | 461 | | 4HL | Zebra stripe 2 | 43:152 | Unknown cultivar | |
| zeb3 | zb3, zb | 223 | | 1HL | Zebra stripe 3 | 40: 72 | Utah 41 | |
| Zeo1 | Knd | 82 | | 2HL | Zeocriton 1 | 41: 89 | Donaria | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Table 3. (continued) | | | | | | | |
| Locus symbol\*  Rec. Prev. | | | BGS no. | Chr. loc.† | Locus name or phenotype | Descr.vol. p. | Parental cultivar |
|  | |  |  |  |  |  |  |
| Zeo2 | | Mo1 | 614 | 2HL | Zeocriton 2 | 41:193 | 36Ab51 |
| Zeo3 | | Mo1 | 184 | 4HL | Zeocriton 3 | 32: 99 | Morex |
| \* Recommended locus symbols are based on utilization of a three-letter code for barley genes as approved at the business meeting of the Seventh International Barley Genetics Symposium at Saskatoon, Saskatchewan, Canada, on 05 August 1996. | | | | | | |
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| † Chromosome numbers and arm designations are based on the Triticeae system. Utilization of this system for naming of barley chromosomes was at the business meeting of the Seventh International Barley Genetics Symposium at Saskatoon, Saskatchewan, Canada, on 05 August 1996. The Burnham and Hagberg (1956) designations of barley chromosomes were 1 2 3 4 5 6 and 7 while new designations based on the Triticeae system are 7H 2H 3H 4H 1H 6H and 5H, respectively. | | | | | | |
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