**Table S5.**

|  |  |  |  |
| --- | --- | --- | --- |
| Gramene QTL category | Count of DEGs enriched |  Enrichment p value  | Gene ID (MSU annotation) |
| Abiotic stress|deep root dry weight|AQAL006|c-9 | 51 |  0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Abiotic stress|deep root dry weight|AQAL015|c-2 | 13 |  0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Abiotic stress|deep root dry weight|AQAL017|c-4 | 5 | 0.0113  | OS04G12620; OS04G12678; OS04G12690; OS04G12960; OS04G12970 |
| Abiotic stress|penetrated root thickness|AQGC034|c-10 | 14 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690 |
| Abiotic stress|root penetration index|AQGC016|c-10 | 14 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690 |
| Abiotic stress|root weight|AQHE052|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Abiotic stress|root weight|AQHE055|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Abiotic stress|root weight|AQHE059|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Abiotic stress|root weight|AQHE085|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Abiotic stress|root weight|CQQ39|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Abiotic stress|root weight|CQQ8|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Anatomy|leaf area|AQAI004|c-9 | 50 | 0.0000  | OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|leaf area|AQAI014|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|leaf width|AQCU222|c-2 | 4 | 0.0018  | OS02G12900; OS02G12939; OS02G13020; OS02G13060 |
| Anatomy|panicle length|AQAB003|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|panicle length|AQCU037|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|panicle length|AQCU231|c-2 | 10 | 0.0003  | OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Anatomy|panicle length|AQCU232|c-2 | 4 | 0.0018  | OS02G12900; OS02G12939; OS02G13020; OS02G13060 |
| Anatomy|panicle length|AQDY116|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|panicle length|AQDY117|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|panicle length|AQDY126|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|panicle length|AQDY127|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|panicle length|AQFJ049|c-9 | 46 | 0.0000  | OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|panicle length|AQFW101|c-2 | 10 | 0.0003  | OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Anatomy|panicle length|AQGM012|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Anatomy|panicle length|CQAS108|c-9 | 24 | 0.0000  | OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|panicle length|CQAS121|c-10 | 18 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820 |
| Anatomy|root length|AQA020|c-9 | 32 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004 |
| Anatomy|root length|AQHE006|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Anatomy|root length|CQAI23|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Anatomy|seminal root length|CQS9|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Anatomy|spikelet density|CQAS124|c-10 | 18 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820 |
| Anatomy|spikelet density|CQAS20|c-2 | 10 | 0.0000  | OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Development|reproductive growth time|CQA33|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Development|reproductive growth time|CQA43|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Development|shoot elongation rate|CQE73|c-9 | 19 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470 |
| Development|shoot elongation rate|CQE74|c-9 | 51 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Development|vegetative growth time|CQA32|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Development|vegetative growth time|CQA42|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Sterility or fertility|pollen fertility|AQBI006|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Sterility or fertility|spikelet fertility|AQAK023|c-10 | 20 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000 |
| Sterility or fertility|spikelet fertility|AQDQ020|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Sterility or fertility|spikelet fertility|AQFW015|c-2 | 10 | 0.0003  | OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Sterility or fertility|spikelet fertility|AQFW259|c-2 | 4 | 0.0018  | OS02G12900; OS02G12939; OS02G13020; OS02G13060 |
| Vigor|root dry weight|AQEX024|c-4 | 5 | 0.0033  | OS04G12620; OS04G12678; OS04G12690; OS04G12960; OS04G12970 |
| Vigor|root dry weight|AQGI088|c-9 | 50 | 0.0000  | OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Vigor|root dry weight|AQGI097|c-9 | 50 | 0.0000  | OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Vigor|seedling vigor|AQEP006|c-9 | 51 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Vigor|tiller number|AQA015|c-9 | 32 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004 |
| Vigor|tiller number|AQDY118|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Vigor|tiller number|AQDY137|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Vigor|tiller number|AQHR023|c-9b | 50 | 0.0000  | OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Vigor|tiller number|CQAI18|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Yield|1000-seed weight|AQCF013|c-10 | 9 | 0.0000  | OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|1000-seed weight|AQCF024|c-10 | 9 | 0.0000  | OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|1000-seed weight|AQCF045|c-10 | 9 | 0.0000  | OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|1000-seed weight|AQDR008|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|grain number|AQDR015|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|grain number|AQDR049|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Yield|grain yield per plant|AQCN013|c-9 | 27 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880 |
| Yield|grain yield|AQF081|c-9 | 19 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470 |
| Yield|panicle number|AQCQ008|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQDY130|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQDY131|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQDY132|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQDY133|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQDY135|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|panicle number|AQFF065|c-4 | 5 | 0.0073  | OS04G12620; OS04G12678; OS04G12690; OS04G12960; OS04G12970 |
| Yield|panicle number|AQFJ010|c-9 | 46 | 0.0000  | OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Yield|panicle number|CQAS122|c-10 | 18 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820 |
| Yield|seed number|AQBK041|c-2 | 13 | 0.0010  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Yield|seed number|AQBK043|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|seed number|CQAS129|c-10 | 20 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000 |
| Yield|seed set percent|AQBK051|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|seed set percent|AQBK055|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|seed set percent|AQFE065|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|seed set percent|AQFE066|c-10 | 27 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|seed set percent|CQAS126|c-10 | 20 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000 |
| Yield|spikelet number|AQBK031|c-2 | 13 | 0.0003  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Yield|spikelet number|AQBK037|c-9 | 51 | 0.0000  | OS09G24580; OS09G24640; OS09G24650; OS09G24660; OS09G24670; OS09G24800; OS09G24910; OS09G24954; OS09G24980; OS09G25050; OS09G25150; OS09G25190; OS09G25310; OS09G25314; OS09G25370; OS09G25410; OS09G25420; OS09G25460; OS09G25470; OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Yield|spikelet number|AQDQ019|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Yield|spikelet number|CQAS110|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |
| Yield|spikelet number|CQAS123|c-10 | 18 | 0.0000  | OS10G35090; OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820 |
| Yield|spikelet number|CQN56|c-2 | 13 | 0.0000  | OS02G12900; OS02G12939; OS02G13020; OS02G13060; OS02G13090; OS02G13100; OS02G13140; OS02G13160; OS02G13170; OS02G13220; OS02G13304; OS02G13450; OS02G13570 |
| Yield|total biomass yield|AQGI246|c-10 | 26 | 0.0000  | OS10G35230; OS10G35240; OS10G35260; OS10G35294; OS10G35436; OS10G35440; OS10G35500; OS10G35520; OS10G35530; OS10G35560; OS10G35630; OS10G35650; OS10G35690; OS10G35720; OS10G35730; OS10G35800; OS10G35820; OS10G35990; OS10G36000; OS10G36070; OS10G36090; OS10G36100; OS10G36170; OS10G36210; OS10G36250; OS10G36270 |
| Yield|total biomass yield|AQHE109|c-9 | 32 | 0.0000  | OS09G25550; OS09G25610; OS09G25620; OS09G25720; OS09G25740; OS09G25760; OS09G25784; OS09G25880; OS09G25910; OS09G25934; OS09G25950; OS09G25970; OS09G26004; OS09G26180; OS09G26190; OS09G26260; OS09G26300; OS09G26310; OS09G26320; OS09G26340; OS09G26350; OS09G26400; OS09G26430; OS09G26440; OS09G26500; OS09G26520; OS09G26530; OS09G26540; OS09G26550; OS09G26554; OS09G26560; OS09G26960 |