а. PLINK TASSEL. c2 17192 POS TOOL MDI IF SNP CHR PVΔI SCR THR SGN 2 16999 c2 14903 c2. 4342. **GWASpoly** additive 0.99 c2 25471 10 48808404 0.000 5.28 4 48 т GWASpoly SHEsis cl 13530 c2 16998 additive 0.99 10 48203431 0.000 5.07 4.48 т **GWASpoly** c2 45611 c2 2201 c2 17191 GWASpolv additive 0.99 c1 8019 10 48863165 0.000 4.93 4 48 Т cl\_16001 c2 12125 **GWASpoly** additive 0.99 c2 45606 48218826 0.000 4.32 4.48 F additive 0.99 c2 549 9 16527499 3.25 4.48 F **GWASpoly** 0.001 **GWASpoly** additive 0.99 c2 9925 1 81410256 0.002 4 48 c2. 549 c2. 45603 c2\_53380 c1 8021 **GWASpoly** additive 0.99 c1 8021 10 48862950 0.002 2.66 4.48 cl 16351 **GWASpoly** additive 0.99 c2 12125 1 71450400 0.002 2.64 4.48 PLINK additive 1.28 c1 16001 10 47539878 0.000 3.94 4.52 F c2. 45611 c2. 45606 PLINK 2.86 4.52 F additive 1.28 c2 17192 1 70472766 0.001 b. c2 9925 2.75 4.52 F **PLINK** additive 1.28 c2 12125 1 71450400 0.002 PLINK 48218826 2.72 4.52 additive 1.28 c2 45606 0.002 **PLINK** additive 1.28 c2 45611 10 48203431 0.002 2.64 4.52 PLINK additive 1.28 c2 14903 1 87322718 0.003 2.50 4.52 F c1\_8019 PI INK additive 1.28 c1 13530 10 48149399 0.003 2.50 4 52 **PLINK** additive 1.28 c2 2201 1 77738822 0.003 2.49 4.52 SHEsis general 3.56 c1 8019 10 48863165 0.000 10.99 4.52 Т SHEsis general 3.56 c1 13526 10 48020996 0.000 10.05 4 52 Т PLINK TASSEL. 4.52 SHEsis general 3.56 c2 45603 10 48073593 0.000 9.89 Т SHEsis general 3.56 c2 25471 10 48808404 0.000 9.65 4.52 GWASpoly SHEsis т SHEsis general 3.56 c2 53380 1 70371898 0.000 8.97 4 52 SHEsis general 3.56 c2 45606 48218826 0.000 8.17 4.52 Т SHEsis general 3.56 c1 16351 10 48761642 0.000 8.00 4.52 Т SHEsis 48203431 7.73 4.52 т general 3.56 c2 45611 0.000 c2\_45603 TASSEL general 1.00 c2 16999 8 54838024 0.001 2.96 4 52 F c2 53380 TASSEL 7 0.001 2.92 4.52 F c2\_45606 general 1.00 c2 4342 14924207 TASSEL 2.86 4.52 general 1.00 c2 16998 8 54838005 0.001 TASSEL general 1.00 c2 17191 1 70474651 0.002 2.67 4.52 TASSEL general 1.00 c2 9925 1 81410256 0.002 2.65 4.52 F TASSEL 2.63 4.52 F general 1.00 c1 16001 10 47539878 0.002 C. **TASSEL** general 1.00 c2 45606 10 48218826 0.005 2.34 4.52 TASSEL 2.31 general 1.00 c2 45611 10 48203431 0.005 4.52 F Column headers: MDL: Model, IF: Inflation factor, SNP: marker name, CHR: Chromosome, PVAL: p-value, SCR: score as -log10 (p-value), THR: significance c1\_8019 threshold as  $-\log 10$  ( $\alpha$  / m), where  $\alpha$  is the significance level, and m is the number of tested markers, and SGN: significance threshold as true (T) or false (F) whether

score > threshold or not