



Figure S1 Linkage and physical maps of *Qphs.pseru-3AS*. (A) Segregation of sprouting resistance in the near-isogenic recombinant population. Plants with Rio Blanco genotypes at the three marker loci, *Xbarc321*, *Xbarc57*, *Xbarc12*, were highly sprouting resistant; the heterozygous plants were moderately resistant; plants with all three NW97S186 marker alleles were highly susceptible. Error bar denotes standard deviation, a, b and c indicate significant difference at $P < 0.01$. (B) The QTL map of *Qphs.pseru-3AS* was developed using two recombinant inbred populations derived from Rio Blanco/NW97S186 and Rio Blanco/NW97S078 (17). The green bar represents the QTL interval on the short arm of chromosome 3A (3AS). (C) The four SSR markers (*Xbarc321*, *Xbarc57*, *Xbarc12*, and *Xgwm369*) close to *Qphs.pseru-3AS* show similar order and genetic distance in another map (Song *et al.*, 2005). (D) Physical map of 3A (Sourdille *et al.*, 2004). Two of the four SSR markers (*Xbarc12*, *Xgwm369*) close to *Qphs.pseru-3AS* are located in the deletion bin 3AS4-0.45-1.00 at the distal end of 3AS.