

**Supplementary Figure 1.** Principal component analysis of shoot and root traits for the *Panicum hallii* RIL population. Traits: PC, principal component; RMR, root mass ratio; SLA, specific leaf area; SRL, specific root length; RTLNRNGTH, root length; LFLG, leaf length; HEIGHT, plant height; SHMASS, shoot biomass; RTMASS, root biomass; RTVOL, root volume; RTN, root number; TN, tiller number; RTD, root tissue density; ED, emergence day; RTDM, root diameter.

