



Figure S4. Some intermediate starch mutant roots have a wild-type gravitropic reorientation. Roots of 5-day-old *ACG20* and *ACG27* seedlings grown embedded in vertical 0.8% agar-containing GM medium respond to 90° gravistimulation similarly to *Ws*. The starchless mutant *ACG21* and *arg1-2* both respond significantly slower than *Ws*. Error bars represent standard errors, stars represent significant T-test values ($p < 0.05$) compared to *Ws*; $n = 52-83$.