

Figure S1. Heat maps showing GhSAMS genes differential expression in *G. hirsutum* under drought & salt stress conditions. Expression of GhSAMS genes under drought stress in the leaf (a) and roots (b). Expression of GhSAMS genes under salt stress in the leaf (c) and roots (d). The higher expression level, lower expression level and no expressions of the GhSAMS genes at a particular time are depicted by red, green and black colors respectively.

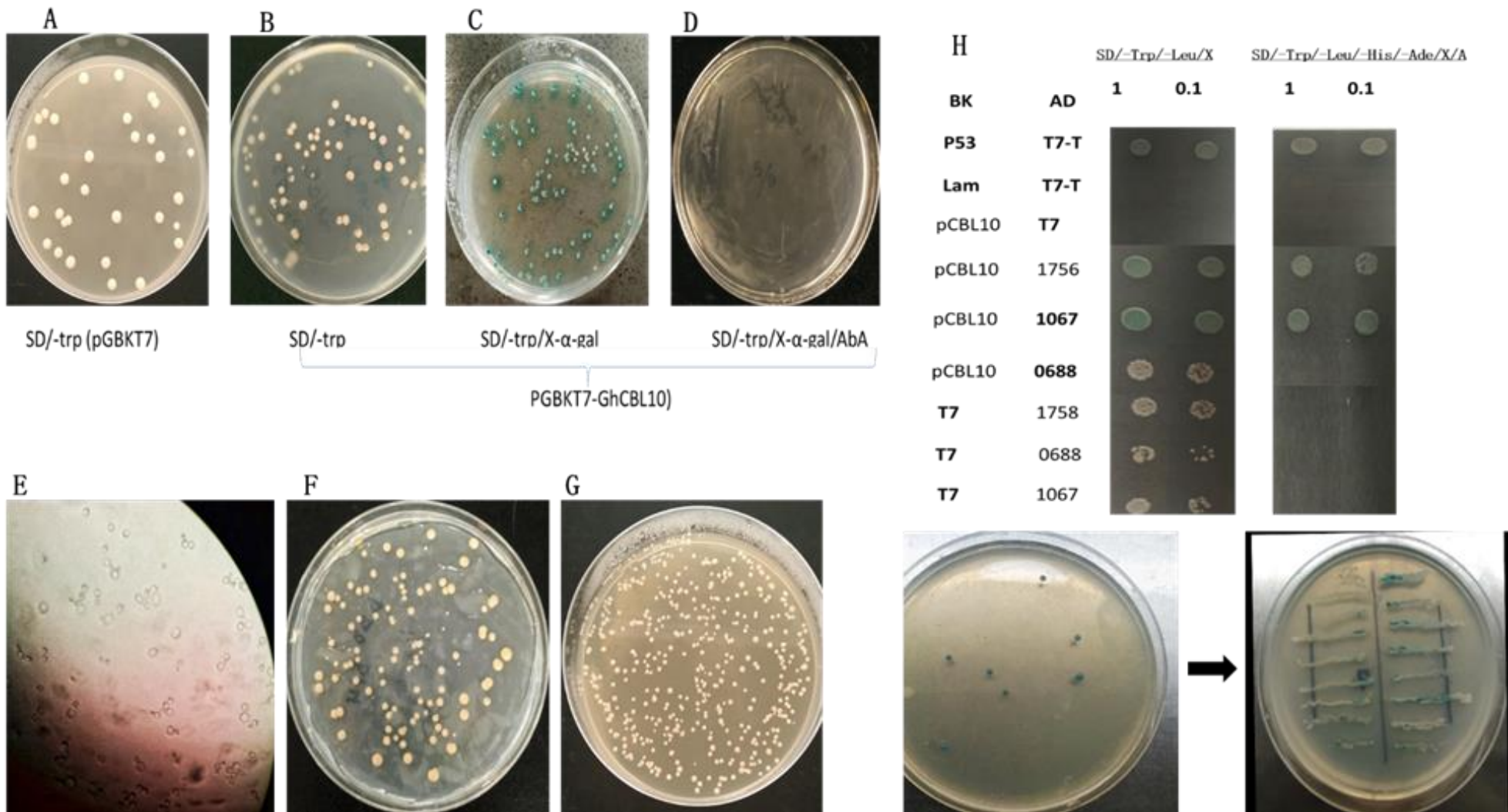


Figure S2. Self-auto-activation state, toxicity test, verification of interactions and mating efficiency determination of GhCBL10 bait gene in Yeast Two Hybrid system. **A:** SD-trp (pGBKT7), **B:** SD-trp plate with pGBKT7-GhCBL10 gene, **C:** SD-trp/X-α-Gal plate with pGBKT7-GhCBL10 gene, **D:** SD/-trp/X-α-Gal/AbA plate with pGBKT7-GhCBL10 gene, **E:** Mated diploid yeast cells; **F:** Monoclonal clones on SD/-trp/-leu (DDO) medium; **G:** Monoclonal clones on SD/-trp medium and **H:** Verifications of interactions between GhCBL10 and SAMS2 gene.

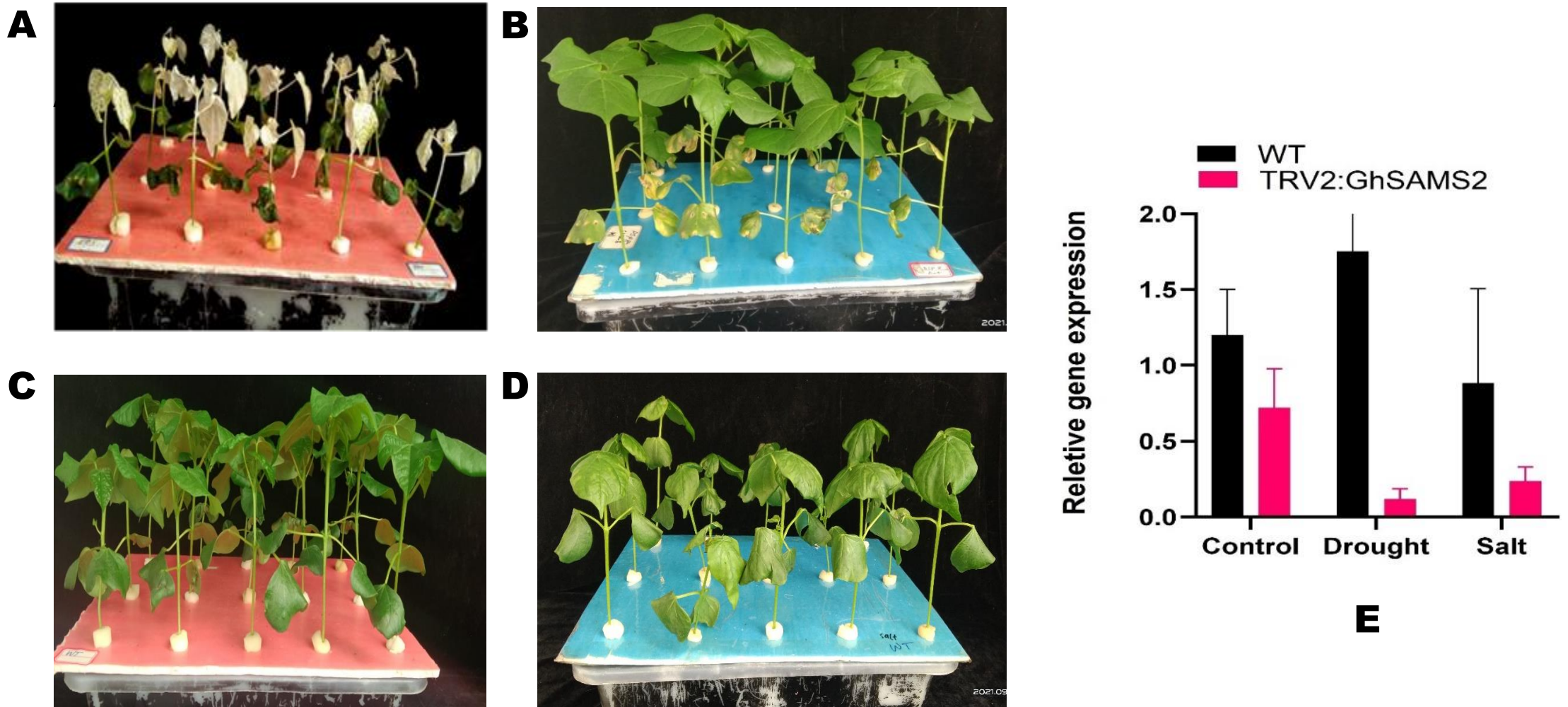


Figure S3. Phenotypic observation of cotton seedlings under VIGS and *GhSAMS2* expression analysis via RT-qPCR. **A:** TRV: PDS albino plant image, **B:** WT plant image, **C:** TRV: 200 plant image, **D:** TRV2:GhSAMS2 image and **E:** Knocked down gene expression analysis in TRV2:GhSAMS2 VIGS and WT plants under control, drought and salt stress conditions.

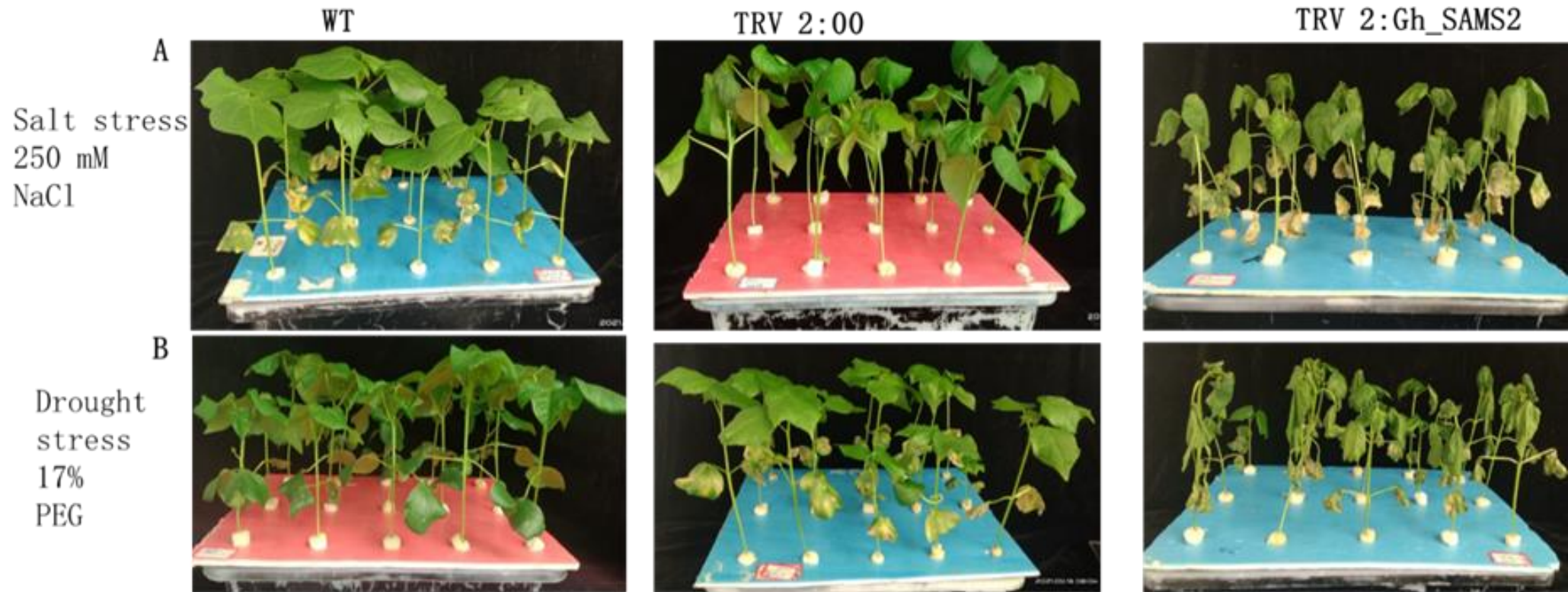


Figure S4. Morphological of VIGS and wild type plants under conditions of drought and salt stress. **A:** Observation of WT, TRV2:00 and TRV2: GhSAMS2 phenotypes, after salt stress treatment. **B:** Observation of WT, TRV2:00 and TRV2: GhSAMS2 phenotypes, 24 h after 17% PEG treatment respectively.