



**Figure S1.** Injection of trehalose into buds of field-grown grapevines using a microsyringe. (A) Buds, nearing bud break (Eichorn-Lorenz Stage 3, brownish wool clearly visible), were obtained from *V. vinifera* cv. Pinot noir grapevines. (B) The buds were treated with trehalose using a microsyringe. (C) After 10 days post treatment, young shoots (Eichorn-Lorenz Stage 5 to 7, bud burst or first leaf unfolded) from the buds were again sprayed with trehalose using an atomizer.