



**Video S1.** Time-lapse video showing 20% SAP coating swelling over a 60 second period. SAP coated on left and coated control on right.

**Table S1.** Field location, soil type, planting date, and final stand count date.

Location	*GPS	*Soil	Planting date/Final stand count date		
Caldwell Rd. Ithaca, NY, USA 14850	42.44° 96' 63" N  76.46° 28' 15.0" W	Williamson  very fine  sandy loam	<b>Trial 1</b>  June 26/July 26	<b>Trial 2</b>  July 24/Aug 22	<b>Trial 3</b>  Sept 17/Oct 17

\*[https://cuaes.cals.cornell.edu/sites/cuaes.cals.cornell.edu/files/shared/documents/CAF\\_Caldwell\\_17x11.pdf](https://cuaes.cals.cornell.edu/sites/cuaes.cals.cornell.edu/files/shared/documents/CAF_Caldwell_17x11.pdf)

**Table S2.** Weather conditions of the three field studies after planting. Data from the first 10 days after planting for Trial 1 and 2, while 15 days for Trial 3 due to cold night conditions.

	Trial 1	Trial 2	Trial 3
*Total Precipitation mm	29	43	63
*Max air Temperature ° C	27	29	21
*Min air Temperature ° C	14	15	6

\*<https://www.nrcc.cornell.edu/wxstation/ithaca/ithaca.html>