SAI Field Trial: Almond Orchard in Lodi, California

In April 2025, we packed up ~240 biodegradable bags. We scaled the amount of materials to the size of the planting hole. We built up 80 bags (photo 1) with the standard materials in John's Blend ("JB", biochar+plant compost+manure compost+bacteria), 80 bags with JB+a material which forms a hydrogel, and 80 bags with JB+the hydrogel+a dry mycorrhizae fungi. We laid the bags next to each planting hole (photo 2), and the bags were placed in the planting hole by the field worker; the process of digging the hole, picking up and tossing the bag in the hole, picking up the tree and placing it in the hole, then replacing the soil, took about 10 seconds/hole. The farmer could not measure the slowdown by the planting crew.

Photo 1: a bag of JB.

Photo 2: a straw used to mark a planting hole, and a bag.

We measured the tree height, the width of the canopy, and the trunk diameter, 3x during the year. The final measurement was on 2 November 2025; for simplicity, we only report on the "JB" trees (about 45 trees in each population) and the control trees (about 120 trees).

Treatment	Height (cm)	Canopy width (cm)	Trunk Diameter (cm)
JB Avg tree	296.8	162.0	3.81
JB Largest tree	330.0	190.0	4.71
Control Avg tree	276.0	135.9	3.36
Control Largest tree	330.0	168.3	4.30

Table 1: Final measurements, comparing JB treated trees to control trees.

Photos, 24 October 2025. Control tree on left, JB treated tree on Right. Note the leaves on the control tree both started dropping earlier, and are less sparse than the JB tree (man is standing behind each tree).