2025 Field Study

Plant Type: “Sungold” Cherry Tomatoes

Summary: On 20 June 2025, we planted 4 “Sungold” cherry tomato plants in 3 gallon pots. The base soil was fresh potting soil; all got an initial dose of tomato fertilizer, and the same amount of water. We used 4 different ratios: control, 12:1, 20:1, and 30:1. For example, 20:1 means 20 parts of the potting soil, and 1 part of the SAI blend of biochar, plant compost, animal compost, beneficial bacteria, beneficial fungi, and a water retention ingredient. All SAI materials are certified by the Ca EPA and by the CDFA, and all are certified organic except for one. All 4 plants started at 17cm tall.

15 July 2025 Update: The 20:1 plant is much larger than the others. The 20:1 plant is 86cm tall and 66cm wide, while the control plant is 57cm tall and 41cm wide. (photo 1)

Photo 1: Sungold cherry tomatoes, left to right: control, 12:1, 20:1, and 30:1 ratio of potting soil to soil amendment.

Over this initial 3.5 week period, the 20:1 plant is growing faster than the others, and producing more blossoms, earlier.

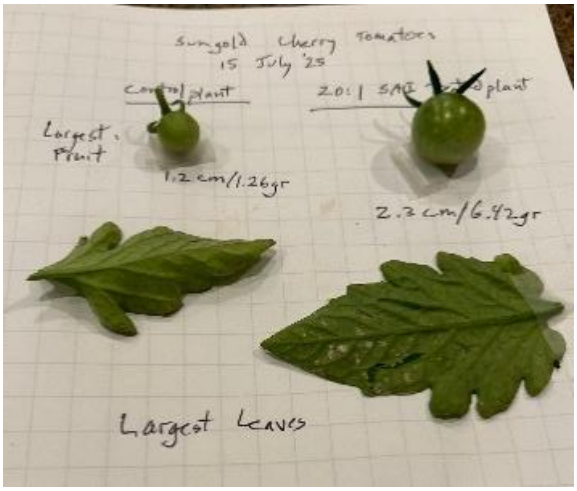

Photo 2: the largest tomato and largest leaf from a control plant (left), and from the 20:1 SAI treated plant (right). The SAI treated plants started blooming about 10 days earlier than the control plants. We attribute the (currently) ~5x larger size of the immature cherry tomatoes to “age”. We expect the largest leaf size difference to be maintained through the first frost.

The largest leaf of the 20:1 plant is ~2.5x larger than the largest leaf of the control plant.

While all 3 SAI plants currently have 7 tomato clusters, the control plant has 5 tomato clusters (at various stages of bloom/fruit). The largest tomato from all 3 SAI treated plants is about the same size, roughly weighing some 5x more (i.e. 6.42gr) than the largest tomato on the control plant (i.e. 1.26gr). In prior field trials with cherry tomato plants, we routinely see more cherry tomatoes/plant, though the maximum size is usually similar. We suspect that the current size difference is due to blooming ~10 days earlier.

This is the 3rd tomato type in 2025 which appears to be optimal at 20:1 in fresh planting soil.

27 August 2025 Update, Final: We shut down this experiment on 25 August 2025; we want to get in one additional cycle of learning before the frosts kill the plants. Here are the final #s.

	Control	12:1	20:1	30:1
# Clusters:	7	8	11	11
# Ripe Tomatoes:	18	30	32	29
Wt of Ripe Tomatoes (gr):	125.8	157	232.2	187.9
Avg Weight (gr):	7	5.2	7.3	6.5
# Green tomatoes:	13	14	21	20
Weight of Gr tomatoes (gr):	27.1	31	37.7	34
Total tomatoes:	31	44	52	49
Total Wt (gr):	152.9	188	269.9	221.9

Left to right. Photo 3: Tomatoes from the control plant. Photo 4: tomaotes from the 12:1 plant. Photo 5: Tomatoes from the 20:1 plant. Photo 6: tomatoes from the 30:1 plant.

Analysis: The purpose of this experiment was to identify the optimal ratio of potting soil:SAI soil amendment. In 2025, we experimented with 8:1, 12:1, 15:1, 20:1, 30:1, and 60:1. This is the third tomato type in 2025, where the 20:1 ratio has the highest yield, in # of tomatoes, in weight of tomatoes, and in avg weight of ripe tomatoes. The purpose was not to get to full harvest.

The 20:1 ratio is will what we recommend on the label for the bags of soil amendment, when planted with fresh potting soil in pots, starting in Q4 2025.