

Cherry Tomato High Tunnel Pruning Trial

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Growers asked:

Is it worth the time to train and prune cherry tomatoes grown in high tunnels? When grown in tunnels, cherry tomatoes provide early market sales before slicers are ripe. But their aggressive growth habit is a challenge to contain, especially in high tunnels where space is at a premium.

In 2016 and 2017 we conducted trials at the Cornell Willsboro Research Farm. Project team included Amy Ivy, Judson Reid from the Cornell Vegetable Program and Michael Davis, Farm Manager. Funding was provided by the Northern New York Agricultural Development Program.

For the trial we grew Supersweet 100 using 3 treatments: single leader, double leader and multi leader. In 2017 the plants were transplanted May 25 and were harvested 3 times per week from July 20 – September 29. In 2016 the first harvest was July 13.

Conclusions: *(graphs are on following page)*

The double leader system was the winner with the highest yield and most efficient harvest time (yield per hour of harvest).

The single leader system had the least time spent pruning/training but the lowest yield. It did have the earliest yield but the double leader quickly caught up.

The multi leader had the least efficient harvest time and slightly lower yield than the double leader.

(See charts on last page)

High Tunnel Pepper Trial – preliminary findings

In 2017 we also studied red bell peppers in high tunnels. Sprinter is sold as a greenhouse variety that needs supplemental heat. We compared its growth in an unheated high tunnel with a field variety, Red Knight. With Sprinter, we also compared the recommended double leader training system with the traditional stake and weave training system. Lastly we compared Red Knight grown inside the tunnel and outside the tunnel.

The data are still be analyzed but here are some observations:

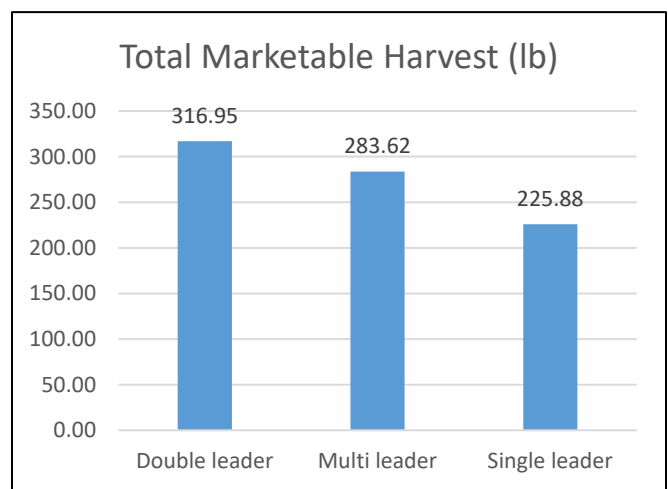
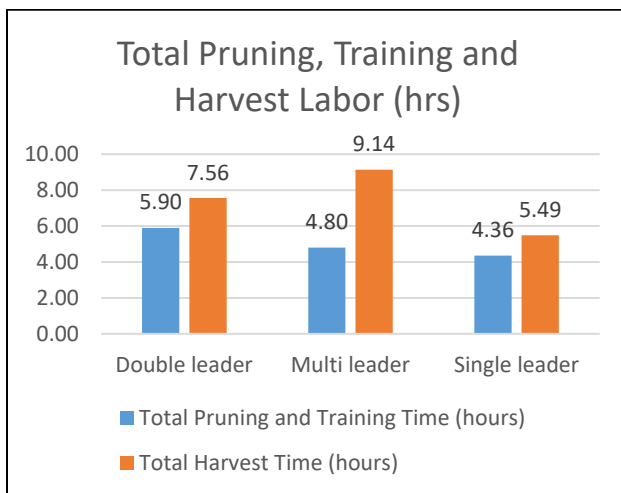
- Without supplemental heat, Sprinter grew very slowly, especially during the unusually cold weather this year mid-May through mid-July, and didn't really begin to ripen until mid-September. It continued to yield well through October but red bell pepper sales are sluggish that late in the season in northern NY. October was unseasonably mild resulting in a longer than expected harvest period for an unheated tunnel. In a more typical year we expect October yields in an unheated tunnel would be less.
- Red Knight produced well in the tunnel in August then dropped off. Plants had fruit but they didn't ripen as well in September.
- Red Knight in the tunnel had double the yield of Red Knight in the field, and much better fruit quality.

- The Sprinter plants trained to a double leader had a lower yield than the stake and weave plants. The time it took to train to the double leader was considerable. The double leader system is better suited to heated conditions for months of harvest.

The final report for both the cherry tomato and red pepper trials will be posted at https://enych.cce.cornell.edu/greenhouse_tunnels.php later this winter.

Some Cherry Tomato Trial Graphs and Charts

The chart on the left shows the more intensive, single leader system, actually takes the least time to prune and harvest. The chart on the right shows the double leader had the highest yield.



The chart below shows the efficiency of harvest. The multi leader system as the least efficient throughout the season.

