

2019

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2019 DSAC High Tunnel Pepper Variety Trial

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This paper reports on seven bell pepper and two sweet pepper cultivar entries evaluated in a high tunnel production system at the University of Illinois Dixon Springs Agricultural Center (DSAC) located in Southern Illinois (Pope County).

The plots were established from transplants set on April 18, 2019. Plants were grown on in-ground raised beds with twin rows of plants spaced at 12 inches with two runs of trickle irrigation (4-inch emitter spacing) per bed and without plastic mulch. The spacing between beds within this high tunnel is 20 inches, making the spacing on each side of the twin rows 3.0 feet, and from the middle of one bed to the middle of the next 3.5 feet.

All plots were replicated three times. Pest control practices followed recommendations given in the *Midwest Vegetable Production Guide for Commercial Growers 2019*. The plots were harvested weekly for the period from June 27 to October 3, 2019, providing a total of 15 harvests. The harvested fruit was sorted and graded based on USDA grades and standards for U.S. No. 1 and U.S. No. 2 sweet peppers <https://www.ams.usda.gov/grades-standards/sweet-peppers-grades-and-standards>, and yield data was recorded accordingly.

Cultivars are listed in descending order of total pounds of U.S. No. 1 fruit harvested per plant in Table 1. Chart 1 provides a comparison of yield in pounds per plant between U.S. No. 1 and U.S. No. 2 grades to the total marketable weight for each cultivar in the trial. Chart 2 illustrates the percent of marketable fruit compared to culls and blossom end rot fruits collected from each of the cultivars in this trial.

Acknowledgements

J. Zakes and K. Bell assisted with field work and data collection on site at the Dixon Springs Agricultural Center. Rupp Seeds donated the seed used in this trial.

Table 1. 2019 DSAC High Tunnel Pepper Variety Trial

| 2019 Pepper Variety Trial-DSAC (High-Tunnel) | | | | | | | | |
|---|------------------------|----------------------|------------------------|----------------------|------------------------|------------------------|-----|---------------------|
| | Total No. 1 Yield | | Total No. 2 Yield | | Total Marketable Yield | Culls | BER | Fruit Size |
| | -----U.S. No. 1----- | | -----U.S. No. 2----- | | U.S. No. 1 & No. 2 | | | U.S. No. 1 |
| Cultivar | <i>fruit per plant</i> | <i>lbs per plant</i> | <i>fruit per plant</i> | <i>lbs per plant</i> | <i>lbs per plant</i> | <i>fruit per plant</i> | | <i>oz per fruit</i> |
| PS09941819 | 4.83 | 2.44 | 5.86 | 1.94 | 4.37 | 1.1 | 0.3 | 8.07 |
| Sweetie | 37.40 | 2.21 | 23.77 | 0.88 | 3.09 | 3.4 | 0.0 | 0.95 |
| PS9979325 | 4.50 | 2.09 | 7.33 | 2.35 | 4.45 | 2.4 | 0.1 | 7.44 |
| Turnpike | 4.35 | 2.00 | 5.88 | 1.91 | 3.91 | 1.1 | 0.0 | 7.36 |
| PS09928302 | 4.06 | 1.92 | 5.03 | 1.62 | 3.54 | 1.6 | 0.8 | 7.57 |
| SV3255PB | 4.17 | 1.84 | 7.25 | 2.24 | 4.08 | 1.7 | 0.3 | 7.06 |
| King Arthur | 2.94 | 1.23 | 7.66 | 2.43 | 3.66 | 2.7 | 0.0 | 6.70 |
| Conical Blend | 6.03 | 1.23 | 13.71 | 1.81 | 3.04 | 2.6 | 0.0 | 3.26 |
| Sprinter | 2.06 | 0.72 | 7.03 | 1.94 | 2.66 | 3.1 | 0.1 | 5.60 |
| *3 replication average | | | | | | | | |
| **descending order based on total yield No. 1 lbs per plant | | | | | | | | |

Chart 1. Total US No. 1 Yield Compared to Total US No. 2 Yield in Overall Total Marketable Weight

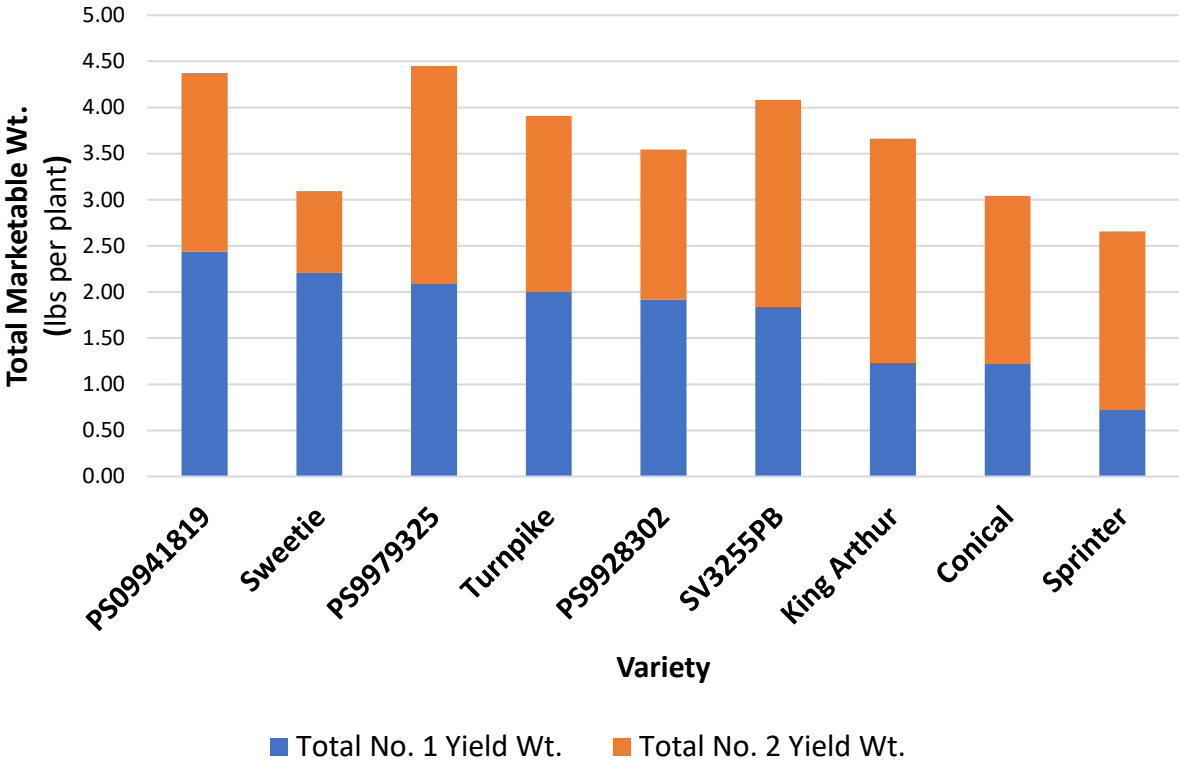


Chart 2. Total Marketable Fruit Compared to Culls and Blossom End Rot

