

Statewide Bell Pepper Cultivar Trial: Results

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To provide growers with information for successful, region specific cultivar selection, in 2008-09, we evaluated several bell pepper cultivars across the state. Field trials were located in central PA at the Russell E. Larson Research and Education Center in Rock Springs, in eastern PA at the Southeast Research and Extension Center in Landisville and in western PA at Janoski Farms in 2008 and Beinlich Farms in 2009.

The cultivars trialed in the 2008 growing season were ‘Snapper’ from Johnny’s Selected Seeds, ‘Red Bull’ from Sakata, ‘Socrates’ from Stokes, ‘Summer Sweet #209’, ACR 285, ‘Escalade’, ‘Excursion’, ‘Excursion II’ and ‘Escape’ from Abbott & Cobb, ‘Polaris’ and ‘Legionnaire’ from Seedway, ‘Stiletto’ from Siegers and ‘Lynx’ and SP-05-47 from NuSeed. In 2009, ‘Stiletto’ and ‘Legionnaire’ were not evaluated; however, ‘Karisma’ and PS1819 from Seedway and ‘Intruder’ from Siegers were added to the trial. In both years, four standard cultivars, ‘Lantern’ from Johnny’s and ‘Revolution’, ‘Aristotle’ and ‘Paladin’ from Stokes, were grown for comparisons.

At all locations peppers were grown in a plasticulture system using raised beds, drip irrigation and black plastic. The first harvest occurred in late July or very early August at all locations. Bell peppers were harvested every 10-14 days as they reached maturity. Fruit was categorized as marketable or unmarketable, counted and weighed. Marketable fruit was graded by size: 4 inches in diameter or greater was categorized as large, 3-4 inches in diameter medium and less than 3 inches small. Yield data was analyzed using analysis of variance. When P values were less than or equal to 0.05, means were separated using Duncan’s LSD test.

Site Specific Methods and Recommendations

Central Pennsylvania, Russell E. Larson Research and Education Center, Rock Springs

In 2008, we anticipated planting about May 23; however, planting occurred on June 13 due to wet spring conditions. As a result transplants were 11 weeks old. Plants were spaced 12 inches apart in a row staggered to the drip line. The 2008 growing season was generally very cool and plants grew slowly. Harvest began on July 25 and ended on September 29.

In 2009, planting of 6-week-old transplants occurred on May 20 using a plasticulture system with the same components and spacing as in 2008. The 2009 season was very cool. It appeared to us that summer skipped central Pennsylvania this year. Harvest began on August 7 and ended on September 13 due to an unusually early snow event on September 14.

SP-05-47, ACR 285, ‘Snapper’ and ‘Red Bull’ produced marketable yields comparable to the standards in terms of number and weight in both years of the trial. The number of marketable

'Summer Sweet #209' peppers produced was comparable or higher than the standards throughout the trial; however, by weight, it was lower than two of the standards in 2008 only. 'Lynx' did not meet the performance of the standards in either year.

The number and weight of large sized peppers, SP-05-47, ACR 285, 'Snapper' and 'Escalade' was generally comparable to the standards, while 'Lynx' did not meet the performance of the standards in either year.

Regarding medium and small sized peppers, all the cultivars trialed preformed as well as the standards with a few outperforming the standards in the medium category in 2009 only.

'Legionnaire', 'Stiletto', 'Karisma' and PS1819 showed potential while 'Intruder' did not; however, since they were only evaluated one year definitive conclusions cannot be drawn.

Eastern Pennsylvania, Southeast Research and Extension Center, Landisville

Eight-week-old transplants were planted on June 3 in both years of the evaluation in a double row system using 12 inch spacing. Plants were staked with a modified California weave system. The first harvest occurred on July 29, 2008 and August 3, 2009 and the last harvest was on October 14, 2008 and October 1, 2009.

ACR 285, 'Excursion II', 'Escalade', 'Red Bull', 'Excursion', 'Polaris' and 'Socrates' all produced comparable marketable yields in terms of number and weight to the standards. 'Escape' and 'Lynx' preformed comparably to 'Paladin' and 'Aristotle' in both years of the trial; however, the weight of marketable peppers produced was less than one or two of the remaining standards in 2008 only.

'Revolution' outperformed all other cultivars for large peppers produced over the two years of the trial. However, all other cultivars preformed as well as or better than the other standards.

ACR 285, 'Escalade', 'Polaris', 'Red Bull', 'Excursion II', 'Excursion', produced comparable medium sized peppers compared to the standards 'Aristotle', 'Paladin' and 'Lantern'.

For small sized peppers, 'Escalade', 'Red Bull' and 'Lynx' preformed the best.

'Stiletto', 'Karisma', 'Intruder' and PS1819 showed potential while 'Legionnaire' did not based on marketable yields; however, since they were only evaluated one year definitive conclusions cannot be drawn.

Western Pennsylvania, Janoski Farms, 2008; Beinlich Farms, 2009

Eight-week-old transplants were set on June 2, 2008 and June 1, 2009 in a single row with 15 inch spacing between plants. In 2008, three weeks after planting it was determined that in an area of the planting, plants were suffering from herbicide injury exacerbated by water damage. Data were not collected from injured plants. Harvest began on July 31, 2008 and August 3, 2009 and was completed on October 1, 2008 and September 17, 2009.

Marketable yields from 'Excursion', 'Escalade', 'Excursion II', ACR 285, 'Snapper', 'Polaris', 'Summer Sweet #209' and 'Escape' were comparable to the standards.

None of the cultivars trialed consistently outperformed 'Revolution' in terms of large peppers. However, 'Escape', 'Excursion II', 'Excursion', ACR 285, 'Polaris', 'Summer Sweet #209' and 'Lynx' yielded comparable large yields to the remaining standards.

'Escalade' generally outperformed the standards except for 'Lantern' in terms of production of small sized peppers.

PS1819 and 'Intruder' showed potential in terms of marketable yields and 'Alliance' in terms of large yields; however, since they were only evaluated one year definitive conclusions cannot be drawn.

Statewide Recommendations

ACR 285, 'Snapper', 'Red Bull', 'Summer Sweet #209', 'Excursion II', 'Escalade', 'Red Bull', 'Excursion' and 'Polaris' produced comparable marketable yields to the standards in at least 2 of the 3 trial sites.

'Revolution' remains the standard for large sized peppers; however, ACR 285 also performed very well.

While conclusions about PS1819 could not be made by site because it was only trialed in 2009, comparing all 3 sites revealed that it performed well.