Evaluation of 11 Bell Pepper Cultivars In Southwest Michigan

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Objective:

To evaluate performance of 11 bell pepper cultivars for adaptability to Southwest Michigan growing conditions.

Summary:

Statistical differences were found for all traits evaluated. SV0964PB and RPP43215 had statistically similar total yield at 1834 and 1673 bushels/acre, respectively. SV0964PB, RPP43215, Aristotle and Turnpike had similar yield of number 1 fruit. Growers should consider SV0964PB and RPP43215 for part of their plantings, providing they are released for commercial production by the seed companies that developed them.

Methods:

Fertilizer: Prior to planting, potassium, sulfur and boron were broadcast at 100, 25 and 2 pounds per acre, respectively. After planting, nutrients were applied through the drip irrigation system using Nitro Plus (18N-5Ca-1.5Mg and a proprietary growth regulator) at 15 gallons/acre on 6/13, 6/20, 6/27, 7/5, 7/11 and 7/18 and Harvest More Urea Mate (5-10-27 plus minor nutrients) at 20#/acre on 7/25, 8/1, 8/8, 8/15, 8/22, 8/29, 9/5 and 9/12 for a total of 188# nitrogen and 150# potassium/acre.

Weed control: Weeds were controlled by black plastic on the beds. Between row weeds were suppressed with Gramoxone using a backpack sprayer.

Planting: Plants were started in the greenhouse 7 April and planted to the field 2 June. Plants were set on raised, black plastic mulched beds, 6” high, 22” wide at the top and 5.5-feet on center. Plants were set in double rows 14” between rows and 18” in the row (10560 plants/acre). The trial was planted and analyzed as a completely randomized design with 16 plants per plot and four replications. Plots were separated by four guard plants.

Plant care: Plots were irrigated as needed and insects and diseases controlled using standard commercial practices.

Harvest and data collection: Harvest was conducted 4, 17, 31 August and 13 and 27 September, 2016. Fruit was graded into Jumbo, Extra Large, Large, Medium, Number Two and Culls. Each category was counted, weighed and converted into bushels per acre. Average number one fruit weight was also determined.

Results:

The 2016 growing season was good for pepper production in Southwest Michigan. Planting was a week later than usual for this trial. Plant growth seemed slow early in the season and fruit set was later, that is why an additional pre-fruit set application of Nitro Plus was applied. The season turned out warmer allowing the plants to reach full size and mature nearly all the fruit.

Differences were noted for all traits measured (Table 1). SV0964PB and RPP43215 had statistically similar highest total yield at 1834 and 1673 bushels/acre, respectively. These two and Aristotle and Turnpike had statistically similar number one yield (total of jumbo, extra-large, large and medium fruit) at 1438, 1254, 1293 and 1241 bushels/acre, respectively. Eight entries had similar average high number one fruit weight with weights ranging from 191 to 200.8 grams/fruit. (Table 1).

Aristotle is a widely planted variety in Midwest bell pepper plantings. This trial indicates it is still among the top performers in several traits but growers should consider SV0964PB and RPP43215 for part of their plantings, providing they are released for commercial production by the seed companies that developed them. Pictures of the 11 entries appear in Figures 1 – 5.