

Project Title: Bacterial Spot Resistant Pepper Cultivar Evaluation - 2003

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Objectives:

1. Evaluate new pepper cultivars for yield, quality and acceptability to Ontario processors when produced under Ontario growing conditions.
2. Coordinate yield and quality evaluations with disease resistance evaluations in order to provide a more complete package on new cultivar performance.

Methodology:

Twelve bell pepper cultivars were seeded in the greenhouse into 200 cell trays containing BM-3 growing media on 24 April 2003. Aristotle and Red Start were included as green and red standard cultivars respectively, and King Arthur was included as an early maturing comparison. The peppers were transplanted on 16 June 2001 into a Brookston clay loam sand spot phase soil on the Ridgetown College research farm, with a row spacing of 1.0 m and in row spacing of 45 cm (22 222 plants/ha).

Weeds were controlled with a preplant incorporated treatment of Edge. Weed escapes were controlled with cultivation and hoeing.

Nitrogen fertilizer was applied preplant at rate of 35 kg/ha actual N. Phosphorous and potassium applications were based on soil analysis. European corn borers were controlled with sprays of Decis and Sevin.

The plots were irrigated with Netafim Streamline irrigation tape. Green and mature peppers were harvested until 09 October.

The trial was established in a randomized complete block design with four replications. A single plot consisted of 1 rows, 8 m in length with 1.0 m between the rows.

Results:

Plant size in 2003 was moderate and fruit size was large. Patriot was the top yielding cultivar (20.5 t/acre) as well as Revolution (19.9 t/acre) and PR01R-1 (19.6 t/acre). Patriot fruit size was moderate, but it produced more fruit per plant than other cultivars (11.3 fruit/plant) Fruit numbers per plant were generally greater than previous years, likely due to the longer harvest season. Mature fruit yields were low, but Revolution produced the highest volume of mature red fruit (6.0 t/acre) followed by Red Start (4.6 t/acre). Cultivars from Pepper Research produced the largest fruit (PR99R-11: 267 g; PR01R-1: 265 g).