

Project Title: Bacterial Spot Resistant Pepper Cultivar Evaluation - 2001

Researcher: J.W. Zandstra and R.C. Squire, Ridgetown College, University of Guelph

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:

Eleven bell pepper cultivars were seeded in the greenhouse into 200 cell trays containing BM-3 growing media on 11 April 2001. Boynton Bell and King Arthur were included as standards. The peppers were transplanted on 08 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. A slight incidence of bacterial spot was present in mid-August, and Kocide was applied.

Green and mature peppers were harvested until 03 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:

Considering the dry conditions of 2001, pepper yields were reasonable. A frost in early October reduced mature yields. Plant size was moderate and fruit size was large. King Arthur continued to be a top yielding cultivar (10.4 t/acre) as well as Orion (10.7 t/acre) and SPP 6112 (10.0 t/acre). Fruit numbers per plant were considerably lower than previous years, and the incidence of sunscald and blossom end rot were greater, although the amount of culls did not differ significantly between the varieties evaluated. Mature fruit yields were low, but Bell King appeared to be early maturing, similar to King Arthur. SPP 8124 and Orion produced the largest fruit (278 and 256 g respectively).