

**Project Title:** Processing Cucumber Cultivar Evaluations - 2005

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**Objectives:**

1. To evaluate new cucumber cultivars for yield performance, quality (fresh and brined), disease tolerance, and adaptability and acceptability to local processors.

**Methodology:**

Cucumber cultivar trials were established on a Brookston clay loam sand spot phase soil on the Ridgetown College research farm. Multipick trials had row spacings of 1.5 m and plants were spaced 15 cm in the rows for a final population of 17 777 plants/acre (44 444 plants/ha). Simulated machine harvest trials had row spacings of 0.5 m, and plants were spaced 10 cm in the rows. Multipick trials were seeded on 03 June and harvest began on 19 July; the plots were harvested 19 times. The simulated machine harvest trial was seed on 16 July and harvested on 19 August.

Weeds were controlled with Command applied preplant. Weed escapes were controlled by hand hoeing. The multipick trial was irrigated with drip irrigation while the machine harvest trial was irrigated when planted to ensure good germination, and was unirrigated for the remainder of the season. Harvested cucumbers were graded according to Ontario commercial standards. Samples of each cultivar of the advanced multipick trial was collected and transported to the Department of Plant Agriculture, University of Guelph in Simcoe, where they brined, and later evaluated for brining quality.

**Results:**

Many new cultivars were evaluated in the multipick trial in 2005. In total, 24 cultivars were evaluated in this trial. In the multipick trial 4506143, Nun 5512C and MacArthur produced the highest value early yields\*\*(\$ 1473, \$1356, and \$1314 per acre respectively). Nun 5512C, Vlasset B, and Eclipse produced the highest total yields (\$6300, \$6209, and \$6144 per acre respectively). Fancipak, Picklet, and Vlasset B demonstrated the highest brined quality

Twenty three cultivars were evaluated in a once-over machine harvest simulation. Yields were less than expected due to the hot, dry weather. Irrigation was not applied in order to make the trial representative of grower conditions. Lafayette C, Nun 5512C and Fiesty produced the highest returns per acre (\$1 377, \$1 369, and \$1 239 per acre respectively). Marketable fruit per plant ranged from 0.8 to 0.4 fruit across all cultivars.

\*\* - includes grades 1-4.