

Project Title: Processing Cucumber Variety Evaluation

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Objective:

The objective of these studies was to evaluate new cucumber varieties for yield performance, quality (fresh and brined), disease tolerance, adaptability and acceptability to Ontario processors for hand-pick applications. New superior yielding cucumber varieties are required to ensure that the industry can compete effectively. Many, new varieties are being introduced by seed companies each year, therefore, variety evaluation is essential in order to recommend these varieties to the industry in Ontario. In particular, varieties that have local adaptability and market acceptance, together with higher yields, improved fresh quality, improved brining quality and better disease tolerance are needed.

Methodology:

Trials were conducted at the University of Guelph, Dept. of Plant Agriculture, Simcoe. One hand-pick trial was conducted in 2006 which combined all named commercial and experimental varieties. This trial evaluated twenty-four varieties to compare how these varieties perform under the same environmental conditions. Each variety was replicated three times. The plot size for these trials was 30 ft by 5 ft and the plants were thinned to 6" in the row to give a plant population of 18,000 plants/acre. This hand-pick trial was harvested five times during the season.

No machine harvest trials were evaluated in 2006 due to Downy Mildew.

The crops were grown according to accepted commercial practices used in Ontario. Data was taken on fresh fruit quality such as fruit shape, length to diameter ratio (L:D), fruit colour, firmness, seed size and overall fruit quality. In addition, yields were measured at harvest as fruit weights, fruit number per plant and dollar value per acre. All varieties were brined at Simcoe, for evaluation by the industry and seed companies in November, 2006.

Results:

Hand Pick Trials

Yields shown in the following summary only include Grades #1 to 4 (including nubs and crooks). This trial, of named and numbered varieties, 4506143 was the highest yielding variety at \$3,869/Acre. This was followed by SG7023 (\$3,865/Acre), Ballerina (\$3,844/Acre), SG7005 (\$3,805/Acre) and Sassy (\$3,796/Acre). The lowest yielding variety in this trial, Endeavor, yielded \$2,879/Acre.

Yield of Cucumbers From Multipick Trial, Simcoe, 2006

Cultivar	Source	Yield	
		T/Ac Total	\$/Ac Total
4506143	Seminis	18.5	3,869
SG7023	Syngenta (Rogers)	15.0	3,865
Ballerina (2686)	Nunhems	14.9	3,844
SG7005	Syngenta (Rogers)	17.1	3,805
Sassy (9465)	Harris Moran	15.9	3,796
Classy	Harris Moran	15.5	3,787
Jackson C	Nunhems	16.6	3,786
Wainwright (NUN5512)	Nunhems	16.1	3,763
Cates (5613)	Nunhems	15.8	3,672
Feisty (9464)	Harris Moran	14.2	3,649
Moxie (8460)	Harris Moran	15.3	3,641
Patton C	Nunhems	14.0	3,587
BCP-015	Harris Moran	14.8	3,537
Fancipak T	Seminis	13.9	3,520
Spunky (0469)	Harris Moran	13.9	3,298
MacArthur C	Nunhems	13.2	3,260
Eclipse	Harris Moran	13.0	3,230
Pershing	Nunhems	12.8	3,138
Vlasset T	Seminis	12.3	3,102
Pony O	Seminis	12.9	3,066
HMX 3483	Harris Moran	12.8	2,991
HMX 6415	Harris Moran	13.1	2,966
HMX 5406	Harris Moran	13.7	2,953
Endeavor	Seminis	12.5	2,879
Soil Type	: Fine Sandy Loam	Plant population	: 18,000 plants/Ac
Soil pH	: 7.3	Fertilizer	: 500 kg/ha of 27.5-0-0
Planting Date	: May 31	Herbicide	: Roundup Transorb 0.6 L/Ac
Plot Size	: 5' x 30'		: Command 0.4 L/Ac
Rows	: 5'	Harvest Dates	: July 19 - August 17, 2006
Plants	: 6"		

* Yields are for comparative purposes only. Small plot yields may not accurately reflect commercial yields.
 Note: Oversize are not included in yield data.