

**Project Title:** Weed Management Studies for Processing Cucumbers

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**Objective:**

The objective of this research project was to develop improved weed management programs for processing cucumbers, by evaluating a range of herbicides for crop tolerance and weed control efficacy on this crop. Information on yield, crop sensitivity and control of problem weeds was developed. Improved weed management programs reduce the need for labor for hand hoeing and weeding, reduce the cost of production to the grower and enhance competitiveness of the processing cucumber industry.

**Methodology:**

Research trials were carried out at the Dept. of Plant Agriculture, University of Guelph, Simcoe during the summer of 2006. Treatments were replicated four times in each experiment. Plots were 10 m long by 2 m wide. Plants were thinned to a known stand appropriate for this crop. Cucumbers were grown according to accepted commercial practices used in Ontario. Crop injury, weed counts, weed biomass, weed ratings and yield were recorded. All trials were harvested by hand at crop maturity. Data was statistically analyzed, tabulated and reported.

**Results:**

Command (clomazone) caused no injury and had good control of all weeds except pigweed and some grasses. The addition of Sandea preemergence improved pigweed control and produced yields comparable to the weeded check. Sandea post improved weed control and when combined with Command gave excellent broadleaf weed control (>90%) and high yields. Alanap pre and post emergence, also controlled pigweed and yields were comparable to Sandea. Two applications of Basagran postemergence at 1/2X recommended rate gave poor broadleaf weed control. Assure (quizalofop-p-ethyl) gave poor grass control postemergence.

Herbicide Evaluations for Cucumbers - 2006

Product	Rate L/Acre or Kg	Application Timing	Injury %	%Control		Yield T/A
				BLW	Grass	
Command	0.47	PRE	0	79	79	9.2
Command	0.63	PRE	0	84	66	10.9
Sandea	0.0142	PRE	0	20	74	7.7
Command + Sandea	0.47 0.0142	PRE PRE	0	85	68	9.4
Command + Sandea	0.63 0.0142	PRE PRE	0	78	89	11.5
Sandea	0.0142	POST1	0	86	46	11.1
Sandea	0.0284	POST1	0	82	62	9.0
Command + Sandea	0.47 0.0142	PRE POST1	0	91	55	12.2
Command + Sandea	0.47 0.0284	PRE POST1	0	97	73	10.6
Command + Sandea	0.63 0.0142	PRE POST1	0	94	64	10.1
Command + Sandea	0.63 0.0284	PRE POST1	0	95	64	9.7
Command + Alanap	0.47 6.1	PRE PRE	0	89	71	10.6
Command + Alanap	0.63 6.1	PRE PRE	0	91	63	6.8
Command + Alanap	0.47 1.52	PRE POST1	0	85	47	8.8
Command + Alanap	0.63 1.52	PRE POST1	0	94	53	10.8
Basagran + Basagran + Assure II	0.354 0.354 0.253	POST1 POST2 POST2	0	51	63	10.6
Untreated (non weeded)			0	0	0	6.7
Weeded Check			0	100	100	10.7

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