

Project Number: 13K 3419 5228

Title: Weed control in green peas.

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Reporting Period: 2006-07

Accomplishments: A pea herbicide trial was conducted in 2006 in which weed control and yield parameters were measured against planting date. Six herbicides were tested for crop safety in green peas; a total of twenty treatments were applied.

Results: Results will be presented at the Western Washington Horticultural Association meeting in January, 2007.

Green pea (cv. 'Snake') was planted May 16 (early planting) and June 15 (late planting) at WSU NWREC. PRE and POST herbicides were applied May 19 and June 8 for the early planting and June 15 and July 15 for the late planting, respectively. Crop injury and weed control were rated July 22 and August 1 for the early and late plantings, respectively. Pea plants within a randomly placed 1-m² quadrat in each plot were pulled from the soil July 26 for the early planting and August 17-18 for the late planting. These plants were counted and pods containing harvestable peas stripped and counted. From those pods, 100 pods were randomly selected and opened, and peas weighed. Total pea yield for each plot was then calculated. The experimental design was a randomized complete block with three replicates. Results are included in the Table.

Chateau and Spartan treatments caused slight damage to pea, but only in the early planting; sequential application of Basagran did not increase crop damage in these treatments, however. Herbicides were 16% more effective in the early planting than in the late planting, probably due to more effective rainfall incorporation in the early planting. Basagran improved weed control an average of 12% across both plantings. Pod production per pea plant was not statistically affected by treatments or timings, while yield of late planted peas was statistically poorer than yield of early planted pea.

Table. Weed control and pea yield parameters after treatment with several herbicides at early and late planting times.

Treatment	Rate	Crop injury ^b		Weed control ^b		Pod production		Pea yield	
		Early	Late	Early	Late	Early	Late	Early	Late
	product/a	%	%	%	%	pod/pl	pod/pl	ton/a	ton/a
Prowl	2.1 pt	0	0	90	68	5.4	5.5	3.2	1.6
Prowl + Basagran	2.1 pt + 1.5 pt	0	0	95	87	4.0	5.5	2.7	1.5
Sencor	5.3 oz	0	0	97	72	4.8	5.2	3.4	1.5
Sencor + Basagran	5.3 oz + 1.5 pt	0	0	98	78	5.4	4.9	3.6	1.9
Command	10.7 fl.oz	0	0	98	70	4.7	5.7	2.8	1.5
Command + Basagran	10.7 fl.oz + 1.5 pt	0	0	100	85	5.7	5.0	3.6	1.1
Chateau	1.3 oz	2	0	95	62	5.1	4.8	3.0	1.4
Chateau + Basagran	1.3 oz + 1.5 pt	2	0	97	70	5.2	5.0	3.4	1.5
Spartan	6.4 oz	3	0	90	73	4.7	4.9	2.7	1.7
Spartan + Basagran	6.4 oz + 1.5 pt	3	0	95	92	4.8	4.5	2.4	1.9
Weedy check	---	0	0	45	37	4.5	5.1	2.7	1.3
Basagran alone	1.5 pt	0	0	70	80	3.3	4.7	1.9	1.5
LSD _{0.05}	---	1	1	8	8	ns	ns	ns	ns

^aPRE = preemergence (all herbicides except Basagran) applied May 19 and June 15 (early and late planting, respectively);

POST = postemergence (Basagran only) applied June 8 and July 15 (early and late planting, respectively).

^bCrop injury and first weed control evaluated July 22 and August 1 (early and late planting, respectively).