

**Project Number:** 13K 3419 5228

**Title:** Weed control in green peas.

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**Reporting Period:** 2005-06

**Accomplishments:** A pea herbicide combination trial was conducted in 2005 in which weed control and yield parameters were measured. Eight herbicides alone and in various combinations 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, 2005.

*Reduced rate trial.* Green pea (cv. 'Snake') was planted May 20, 2005 at WSU NWREC. PRE and POST herbicides were applied May 21 and June 10, respectively. Crop injury and weed control were rated June 7 and weed control was rated again on August 9. Pea plants within a randomly placed 1-m<sup>2</sup> quadrat in each plot were pulled from the soil July 29 through August 2. 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 four replicates. Results are included in the Table.

All tested PRE herbicide treatments resulted in excellent weed control by early June. Products still providing greater than 90% weed control by harvest included Command alone or mixed with Chateau or Spartan, Sencor mixed with Chateau or Spartan, Outlook + Spartan, or Chateau or Spartan followed by Basagran. Pea pod production was generally good following most treatments, with poorer production resulting from those treatments giving poorer weed control. Chateau followed by Basagran, however, gave 97% weed control but treated peas only produced 4.2 pods/plant, indicating that that combination might have caused a degree of crop injury. Yield closely followed pod production, with all treatments significantly increasing yield from 2.4 tons/a in weedy check plots.

Table. Weed control on pea yield parameters from several herbicides at full and reduced rates.

Treatment	Rate product/a	Timing <sup>a</sup>	Crop injury <sup>b</sup> %	Weed control <sup>b</sup>		Pod production pods/plant	Pea yield tons/a
				June 7 %	August 9 %		
Axiom	1.1 lb	PRE	1	94	69	4.4	3.4
Sencor	5.3 oz	PRE	0	95	80	5.0	4.0
Command	10.7 fl.oz	PRE	0	89	95	5.4	4.3
Outlook	14.3 fl.oz	PRE	1	97	71	4.8	3.9
Chateau	1.25 oz	PRE	1	96	75	5.0	3.9
Basagran	1.5 pt	POST	---	---	80	5.1	4.0
Axiom + Chateau	1.1 lb + 1.25 oz	PRE + PRE	3	96	86	5.5	4.1
Axiom + Spartan	1.1 lb + 4.3 oz	PRE + PRE	1	95	89	5.6	4.3
Sencor + Chateau	5.3 oz + 1.25 oz	PRE + PRE	1	98	94	6.1	3.7
Sencor + Spartan	5.3 oz + 4.3 oz	PRE + PRE	3	100	94	5.7	4.5
Command + Chateau	10.7 fl.oz + 1.25 oz	PRE + PRE	1	98	99	5.2	4.9
Command + Spartan	10.7 fl.oz + 4.3 oz	PRE + PRE	1	95	100	5.2	4.3
Outlook + Chateau	14.3 fl.oz + 1.25 oz	PRE + PRE	4	97	89	5.7	4.1
Outlook + Spartan	14.3 fl.oz + 4.3 oz	PRE + PRE	3	98	90	5.6	4.0
Chateau + Basagran	1.25oz + 1.5 pt	PRE + POST	0	95	97	4.2	3.8
Spartan + Basagran	4.3 oz + 1.5 pt	PRE + POST	0	89	97	5.1	3.8
Chateau + MCPA	1.25 + 4 fl.oz	PRE + POST	1	96	74	5.2	4.1
Spartan + MCPA	4.3 oz + 4 fl.oz	PRE + POST	0	90	81	4.3	3.8
Untreated	---	---	0	0	0	3.1	2.4
LSD <sub>0.05</sub>	---	---	ns	5	10	1.0	0.9

<sup>a</sup>PRE = preemergence, applied May 21, 2005; POST = postemergence, applied June10, 2005.

<sup>b</sup>Crop injury and first weed control evaluated June 7, prior to POST treatments.