

**Study Name:** Timing of weed control in imidazolinone-tolerant canola

**Study Number:** 9906

**Objectives:** Evaluate weed control with Raptor applied at different rates and stages

**Results:** Flea beetle pressure was extremely high in this field. Even though the canola seed was treated with Gaucho, we had to make a foliar insecticide application to help reduce the flea beetle pressure. The canola remained in the cotyledon to 2-leaf stage for an extended period due to the flea beetles and wet soil.

The objective of this study was to compare weed control from soil-applied products with Raptor at different rates and timings. The primary weeds were kochia, foxtails, lambsquarters, and pigweed. Other species present were shepherdspurse, field pennycress, and biennial wormwood. Treflan and Sonalan did not control the mustard species or biennial wormwood, but generally provided good control of kochia, foxtails, lambsquarters, and pigweed. Treflan or Sonalan followed by a postemergence application of Raptor was as effective or better than Treflan or Sonalan alone.

Raptor controlled foxtails, lambsquarters, pigweed, shepherdspurse, and field pennycress, but was weaker on kochia and biennial wormwood. The early application (cotyledon to 2-leaf) was not as effective as the later applications as it missed later flushes of weeds. Weed control with Raptor was generally higher with 4 fl oz compared to 2 fl oz. The split application of Raptor (2 fl oz + 2 fl oz) was also very effective on all weeds except kochia and biennial wormwood.

Table. Timing of weed control in imidazolinone-tolerant canola.

Treatment <sup>a</sup>	Rate	Timing <sup>b</sup>	June 25				July 26	
			Kocz	Fxtl <sup>c</sup>	Colq	Rrpw	Kocz	Yield
			-----Control (%)-----					lb/A
Treflan	1.5 pt	A	93	93	98	92	88	1495
Treflan / Assure II	1.5 pt / 8 oz	A / C	94	95	97	98	79	1482
Sonalan	2 pt	A	92	93	97	99	89	1713
Sonalan / Assure II	2 pt / 8 fl oz	A / C	93	98	98	98	87	1558
Treflan / Raptor	1.5 pt / 2 oz	A / C	93	98	100	100	88	1530
Sonalan / Raptor	2 pt / 2 fl oz	A / C	97	100	100	100	95	1563
Raptor	2 fl oz	B	65	78	63	96	62	1493
Raptor	2 fl oz	C	72	94	95	97	63	1444
Raptor	2 fl oz	D	78	95	90	97	63	1679
Raptor	4 fl oz	B	65	95	95	100	42	1374
Raptor	4 fl oz	C	85	99	100	100	67	1502
Raptor	4 fl oz	D	85	95	87	99	70	1418
Raptor / Raptor	2 fl oz / 2	B / D	70	100	100	100	62	1474
Raptor / Raptor	1 fl oz / 1 oz	B / D	78	98	90	100	60	1492
Handweed check + Treflan / Raptor	1.5 pt / 2 oz	A / C	99	100	100	100	98	1491
Weedy check			0	0	0	0	0	1329
LSD			13	10	8	5	17	444
CV			10	7	5	3	14	17

<sup>a</sup> All Raptor treatments included NIS (0.25%) and 28% Nitrogen (1qt)

<sup>b</sup> A=PPI; B=cotyledon to 2-lf canola; C=3 to 4-lf canola; D=5 to 6-leaf canola

<sup>c</sup> Fxtl=green and yellow foxtail