

Weed control in no-till chickpea (2003)

B-90 chickpeas were seeded April 28 into 7.5-inch rows at 180 lb/A. Individual plots were 10 x 30 ft and replicated three times. PRE and POST treatments were applied April 30 and June 2, respectively. The primary weeds evaluated were kochia (Kocz), redroot pigweed (Rrpw), and biennial wormwood (Biww). Chickpeas were harvested Aug 25.

Treatment	Rate	Timing	Kocz		Rrpw		Biww		Chickpea	
			Jun 7	Jun 20	Jun 7	Jun 20	Jun 7	Jun 20	Yield	Test Wt
			% control						lb/A	lb/bu
Roundup + Spartan/ Select	13 fl oz + 2.67 oz/ 5 fl oz	PRE/ POST	79	84	88	85	77	78	2309	61.0
Roundup + Spartan/ Select	13 fl oz + 4 oz/ 5 fl oz	PRE/ POST	94	96	95	96	92	81	2440	63.4
Roundup + Spartan/ Select	13 fl oz + 5.33 oz/ 5 fl oz	PRE/ POST	100	97	100	98	99	96	2669	63.3
Roundup + Spartan + Balance/ Select	13 fl oz + 4 oz + 2 oz/ 5 fl oz	PRE/ POST	100	100	100	99	100	100	2722	62.2
Roundup + Spartan + Sencor/ Select	13 fl oz + 4 oz + 0.33 lb/ 5 fl oz	PRE/ POST	97	98	100	98	100	98	2633	62.7
Roundup + Spartan/ Tough + Select	13 fl oz + 4 oz/ 1.5 pt + 5 fl oz	PRE/ POST	100	100	100	100	100	100	2696	62.5
Roundup + Spartan/ Sencor + Select	13 fl oz + 4 oz/ 0.25 lb + 5 fl oz	PRE/ POST	95	100	98	100	100	100	2438	62.7
Handweeded check ^b			100	100	100	100	100	100	2638	62.2
Untreated			0	0	0	0	0	0	--	--
LSD (0.05)			6	5	7	4	4	3	NS	NS
CV			4	3	5	2	3	2	8	1.8

^aRoundup treatments were Roundup UltraMax applied with AMS at 2.5 gal/100 gal, Select was applied with COC at 1% v/v.

^bRoundup + Spartan followed by Tough + Select were applied to aid in handweeding.

Several PRE and POST herbicide treatments were evaluated for chickpea tolerance and weed control. Herbicide treatments included Spartan alone, Spartan tank mixed with Balance or Sencor, or Spartan followed postemergence by Tough or Sencor. All PRE treatments were tank mixed with Roundup UltraMax. Previous studies have shown Sencor applied postemergence to cause slight to moderate crop injury. Sencor applied postemergence is not a labeled treatment.

In late May, the chickpea crop started to exhibit symptoms consistent with clopyralid injury. Unfortunately, we failed to remember that Curtail (clopyralid + 2,4-D) was applied to this field in 2002. Chickpea tolerance to herbicides in this study was not evaluated due to the confounding effect of the herbicide carryover from 2002. Chickpea injury due to Curtail carryover was not as severe in this no-till study compared to the conventionally-tilled chickpea study.

All treatments provided excellent (>90%) kochia and redroot pigweed control, with the exception of the low Spartan rate (2.67 oz), which provided good control (80-89%) of kochia and pigweed. All treatments provided excellent biennial wormwood control with the exception of the two lower Spartan rates (2.67 and 4 oz). Statistically, there was no significant yield difference between herbicide treatments. The untreated check could not be harvested because it was completely overrun by kochia.