Fall-applied Spartan in chickpea (2003)

B-90 chickpeas were seeded April 24 into 7.5-inch rows at 180 lb/A. Individual plots were 10 x 30 ft and replicated three times. Fall, PRE, and POST treatments were applied November 19, April 24, and June 2, respectively. The primary weeds evaluated were kochia (Kocz), redroot pigweed (Rrpw), and wild buckwheat (Wibw).

			Kocz			Rrpw			Wibw		Yield	Test Wt
Treatment[a]	Rate	Timing	Jun 7	Jun 17	Jul 7	Jun 7	Jun 17	Jul 7	Jun 7	Jun 17	Aug 21	
			% control								lb/A	lb/bu
Spartan	3 oz	Fall	93	81	81	93	83	81	97	84	2320	61.5
Spartan	4 oz	Fall	99	97	93	100	87	87	95	90	2411	62.6
Spartan	5.33 oz	Fall	99	98	99	100	95	94	100	96	2793	62.4
Spartan / Tough	3 oz / 1.5 pt	Fall / POST	100	100	100	100	100	100	100	100	2406	62.6
Spartan / Tough	4 oz / 1.5 pt	Fall / POST	100	100	100	100	100	99	99	100	2048	62.2
Spartan / Tough	5.33 oz / 1.5 pt	Fall / POST	99	100	100	98	100	100	99	98	2846	62.4
Spartan	3 oz	PRE	100	100	96	94	90	91	95	90	2528	62.5
Spartan	4 oz	PRE	100	100	100	98	94	94	96	93	2302	62.4
Spartan / Tough	3 oz / 1.5 pt	PRE / POST	100	100	100	98	98	100	92	92	2870	62.4
Spartan / Tough	4 oz / 1.5 pt	PRE/ POST	100	100	100	100	100	100	97	97	2777	62.9
Tough	1.5 pt	POST	92	100	100	85	99	98	47	55	2263	62.5
Untreated			0	0	0	0	0	0	0	0	808	61.9
LSD (0.05)			7	7	9	9	8	6	8	13	658	NS
CV			4	5	6	6	5	4	6	9	16	0.9

[a]*Select + COC (5 fl oz + 1% v/v) was applied postemergence alone or with Tough to all treatments to control grasses.*

There was no visible chickpea injury with any treatment at any evaluation date. This study and others have demonstrated that chickpeas have excellent tolerance to Spartan.

Most herbicide treatments in this study provided good to excellent control of kochia, redroot pigweed, and wild buckwheat. Weed control with the low Spartan rate (3 oz) applied in the fall began to falter late in the growing season. Weed control was best where Tough was applied postemergence following Spartan. Tough applied alone provided excellent kochia and pigweed control, but did not control wild buckwheat.

There was a significant difference in chickpea yield between herbicide treatments; however, treatment yields were affected by where the replicates were located within the study area. Yields tended to be higher on the southern half of the study area, which remained more moist during the growing season. Therefore, we recommend that yield differences be disregarded.