Sharpen for preplant weed control in field pea, Carrington, 2008. (Greg Endres). The field trial was established under conventional till on a Heimdahl-Emrick loam soil with 2.8% organic matter and 6.8 pH. The experimental design was a randomized complete block with three replicates. Herbicide treatments were applied with a CO_2-hand-boom plot sprayer delivering 10 gal/A at 35 psi through 8001 flat-fan nozzles to the center 6.7 ft of 10 by 25 ft plots on June 4 with 52 F, 99% RH, 100% cloudy sky, and 4 mph wind to 1-inch tall common lambsquarters and 0.5- to 1-inch tall wild buckwheat. Rainfall totaled 0.32 inches during 2 days before and 1.34 inches 2 days after herbicide application. 'Admiral' field pea was seeded on June 17.

Common lambsquarters control generally was excellent with all treatments three weeks after treatment (Table). Sharpen plus glyphosate provided good (82%) control of common lambsquarters six weeks after application and generally improved control compared to glyphosate. Sharpen and Sharpen plus glyphosate provided greatly improved control of wild buckwheat compared to glyphosate. No crop response was observed.

Table.												
		Weed control[1]										
Herbicide		6/9			6/27			7/18			7/29	
Treatment[2]	Rate	colq	wibw		colq	wibw		colq	wibw		colq	wibw
	fl oz product/A											
Untreated check	0	0	0		0	0		0	0		0	0
Sharpen + COC + AMS	1 + 1% + 0.5% v/v	99	99		98	78		75	68		77	71
Glyphosate + NIS + AMS	24 + 0.25% + 0.5% v/v	99	70		86	56		58	27		47	23
Sharpen + glyt + COC + AMS	1 + 24 + 1% + 0.5% v/v	99	99		91	77		82	63		66	67
Sharpen + glyt + COC + AMS	2 + 24 + 1% + 0.5% v/v	99	99		96	81		82	73		78	71
Aim + glyt + COC + AMS	0.54 + 24 + 1% + 0.5% v/v	99	99		91	69		60	50		48	43
C.V. (%)		0.0	0.5		7.8	11.1		15.0	22.4		19.7	17.9
LSD (0.05)		0	1		11	13		17	21		21	16
[1]colq=common lambsquarters; wibw=wild buckwheat.												
[2]Glyt=Roundup Original (Monsanto); NIS=Preference (WinField); AMS=Blue Diamond Activator; COC=Destiny (Winfield); 2,4-D=Cornbelt 4 lb Amine.												