Weed control with Zidua herbicide in soybean, Carrington, 2011. Greg Endres. The experiment was conducted at the NDSU Carrington Research Extension Center in cooperation with BASF. Experimental design was a randomized complete block with three replicates. The field trial was established on a Heimdal-Emrick loam soil with 4.1% organic matter and 6.6 pH. 'DSR0401' Roundup Ready soybean was direct seeded into flax stubble May 25 in 30-inch rows. Treatments were applied with a hand-held boom sprayer delivering 14 gal/A at 35 psi through 8001 flat fan nozzles to the center 6.7 ft of 10- by 25-ft plots. PRE treatments were applied on May 26 with 46 F, 51% RH, and no wind to 1- to 2-leaf yellow and green foxtail, 1- to 2-inch tall wild buckwheat, and 0.5- to 1-inch tall kochia. Rainfall totaled 0.6" during the 6 days following application of herbicides (NDAWN). POST treatments were applied on July 7 with 80 F, 54% RH, and 6 mph wind to 2- to 4-stage soybean, 3- to 8-inch tall foxtail, and 6- to 9-inch wide sheperdspurse. The trial was harvested for grain yield on October 5.

Soybean emerged about June 6 and no crop response from PRE herbicides was noted on June 13. Foxtail control on June 20 was good to excellent (84-98%) with all PRE Zidua tank mixtures (Table). Wild buckwheat control was excellent with all treatments when evaluated on June 20. On July 2 (before application of POST treatments) Zidua at 2.5 oz wt/A + Sharpen generally provided excellent (86-92%) control of foxtail and sheperdspurse. Extreme + Sharpen + Zidua generally provided excellent (88-99%) weed control throughout the trial period and increased soybean seed yield compared to other PRE treatments. Sequential POST treatments provided excellent control of foxtail and sheperdspurse on July 28 and resulted in the highest soybean yield.

Tal				1							ı		
Herbicide			Weed control (%) ¹								Soybean		
	Treatment ²	Rate	Timing ³		20-Ju	n		2-Ju	l	28	-Jul	Yield	
No		fl oz product/A		fota	shpu	wibw	fota	shpu	KOCZ	fota	shpu	bu/A	
1	Sharpen	1	PRE	78	82	99	65	77	78	37	77	10.9	
2	Zidua + Sharpen	2 oz wt +1	PRE	91	83	99	86	80	95	65	77	19.4	
3	Zidua + Sharpen	2.5 oz wt +	PRE	94	90	97	90	90	99	65	83	17.9	
4	Zidua + Verdict	2.5 oz wt + 5	PRE	92	92	98	87	87	99	65	86	20.0	
5	ValorSX	2 oz wt	PRE	74	77	98	68	77	70	13	78	13.6	
6	Zidua + ValorSX	1.5 oz wt + 2 oz wt	PRE	84	73	99	80	80	87	58	83	17.9	
7	Authority First	3 oz wt	PRE	83	78	99	75	76	99	42	73	12.4	
8	Zidua + Sharpen	2.5 oz wt +	PRE	92	83	99	92	86	99	98	98	29.9	
	Zidua	1 oz wt	POST										 _
9	ValorSX Warrant	2 oz wt 40	PRE POST	78	86	90	75	81	70	97	98	27.1	 +
10	Zidua + ValorSX	1.5 oz wt + 2 oz wt	PRE	90	84	95	82	84	99	97	99	30.6	
	Warrant	40	POST										
11	Extreme + Sharpen + Zidua	36 + 1 + 2.5 oz wt	PRE	98	93	98	98	97	99	88	96	27.6	
	/. (%)	9.5	9.0	2.2	7.3	7.9	19.7	18.5	6.4	22.3			
LSD (0.05)					NS	4	10	11	NS	21	9	7.9	
¹ fo	a=yellow and gree	n foxtail; shp	u=shephe	erdspu	rse; wib	w=wild b	ouckw	heat; k	OCZ=k	ochia.			 _
	treatments include atments 1-8 and 11						fl oz/	A plus (Class Ac	t NG at	: 16 fl oz	z/A. All PRE	
³ PF	RE=May 26; POST	=July 7.											
1													