Weed control with Zidua herbicide in soybean, Carrington, 2013. Greg Endres and Mike Ostlie. The trial was conducted at the NDSU Carrington Research Extension Center in cooperation with BASF to evaluate soybean weed control with Zidua and other soil-applied herbicides. Experimental design was a randomized complete block with three replicates. The field trial was established on a conventionally-tilled Heimdal-Emrick loam soil with 3.8% organic matter and 6.5 pH. 'DSR0404' Roundup Ready soybean seed was inoculated and planted at 200,000 seeds/A on May 28 in 15-inch rows. Herbicide 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 29 with 62 °F, 81% RH, and 7 MPH wind. Rainfall totaled 0.9 inches within 7 days of PRE herbicide application. POST Roundup PowerMax at 32 fl oz/A plus Class Act NG at 2.5% v/v was applied to all plots including the check on July 3 with 75 °F, 43% RH, and 5 mph wind to V3-stage soybean, 4- to 8-inch tall green and yellow foxtail, 1- to 5-inch tall common lambsquarters, 1- to 10-inch tall kochia, 2- to 10-inch tall redroot and prostrate pigweed, and 3- to 20-inch long wild buckwheat. The trial was combine harvested for seed yield on October 1.

Foxtail control visually evaluated about 4 weeks after treatment (WAT) was good (84 to 88%) with PRE treatments 4, 12 and 13 (Table). Excellent control (90 to 99%) of all broadleaf weeds in the trial occurred with treatments 4, 5, 7 and 12. Additional treatments that provided excellent weed control included: common lambsquarters - treatments 2, 3, 6, 10, 11 and 13; kochia - treatment 10; pigweed and wild buckwheat - treatments 2, 3, 6 and 13. POST glyphosate generally provided good to excellent control of all weeds 4 WAT. No crop injury was observed on June 12 (2 WAT). Yield was similar among treatments. Dry conditions during soybean reproductive stages combined with soil variability within the trial area contributed to variability of yield data.

Table.

Herbicide			Weed control (%)[1]										Soybean
Treatment[2]		Rate	28-Jun					31-Jul					Yield
No.		fl oz product/A	fota	colq	kochia	piqw	wibw	fota	colq	kochia	pigw	wibw	bu/A
1	Zidua	2.5 oz wt	33	63	0	43	0	99	99	99	99	88	28.1
2	Zidua + Sharpen	2 oz wt +1	71	99	38	96	99	99	99	99	99	99	30.7
3	Zidua + Verdict	2.5 oz wt + 5	76	99	73	91	97	99	99	99	99	99	22.1
4	Zidua + Verdict + Metribuzin	2.5 oz wt + 5 + 10.56 oz wt	84	99	90	99	99	99	99	99	99	99	25.8
5	Zidua + Sharpen + Metribuzin	2.5 oz wt + 1 + 10.56 oz wt	74	99	99	99	99	99	99	99	99	99	25.4
6	Verdict	5	74	99	0	91	97	99	99	99	99	99	21.0
7	Verdict + Metribuzin	5 + 10.56 oz wt	67	99	99	99	99	98	99	99	99	99	26.3
8	Anthem	9	43	30	0	25	13	99	99	99	99	88	29.1
9	Fierce	4.5 oz wt	53	77	76	81	33	99	99	99	99	76	27.7
10	Authority First	8 oz wt/A	55	91	97	86	68	99	99	99	99	88	21.9
11	Authority MTZ	16 oz wt	45	99	68	76	68	98	98	98	98	88	24.4
12	Authority Assist	10	88	99	97	99	99	99	99	99	99	99	31.1
13	Zidua + Pursuit + Sharpen	2.5 oz wt + 2 + 1	86	99	65	99	97	99	99	99	99	99	22.5
14	check	x	0	0	0	0	0	98	99	91	99	88	24.9
C.V. (%)			31.5	26.2	32.0	22.7	20.2	0.6	0.4	3.8	0.4	12.6	32.6
LSD (0.05)			32	37	31	30	24	NS	NS	NS	NS	NS	NS

[1]fota=green and yellow foxtail; colq=common lambsquarters; pigw= redroot and prostrate pigweed; wibw=wild buckwheat.

[2]All treatments include July 3 POST Roundup PowerMax at 32 fl oz/A plus Class Act NG at 2.5% v/v.