

BECK'S 2,4-DB Study – 2010

Planted:	May 28, 2010	Tillage:	No-Till
Harvested:	September 30, 2010	Herbicide:	3 oz. Valor XLT
Rows:	Four 30" rows		48 oz. Glyphosate
Population:	140,000 seeds/A.	Fungicide:	6 oz. Headline
Previous Crop:	Soybeans	Insecticide:	2.56 oz. Warrior

RAINFALL	
April	6.5 in.
May	4.8 in.
June	7.1 in.
July	7.7 in.
August	1.0 in.
Total	27.1 in.

Purpose: In attempting to increase soybean yields, one method being researched is the use of growth regulators to shorten the plant and also induce stress that can kick the plant into a defensive mode and increase yield. 2,4-DB, sold under trade names such as Butyrac, has been used at low rates for years as a supplemental post applied soybean herbicide to increase activity on certain broadleaf weed species. Past anecdotal experience has indicated that this product may increase yields, in spite of its initial harsh effects on the plant. This study was set up in an attempt to quantify any benefits. Headline + Warrior were applied to both treatments in separate applications. The 2,4-DB application rate was 2 oz., without any surfactants.

Brand	Percent Moisture	Standability 1 = Erect 5 = Flat	Bushels [†] Per Acre	Cost of 2,4-DB	Net [^] Return	\$ Return Advantage
<u>HEADLINE + WARRIOR ONLY</u>						
<u>@ R3</u>						
BECK 451NR	12.3	1.0	72.1		\$ 674.14	
BECK 466NR ^{™*}	15.1	1.0	69.2		\$ 647.02	
BECK 400NR ^{™*}	10.1	1.0	63.6		\$ 594.66	
BECK 362NR ^{™*}	10.1	1.0	61.9		\$ 578.77	
BECK 357NR ^{™*}	<u>9.4</u>	<u>1.0</u>	<u>63.1</u>		<u>\$ 589.99</u>	
AVERAGE	11.4	1.0	66.0		\$ 616.92	
<u>2, 4-DB @ R2 + HEADLINE + WARRIOR @ R3</u>						
BECK 451NR	12.4	1.5	71.9	\$.80	\$ 665.97	-\$ 8.17
BECK 466NR ^{™*}	15.3	1.5	71.6	\$.80	\$ 663.16	+\$ 16.14
BECK 400NR ^{™*}	9.7	1.5	61.1	\$.80	\$ 564.99	-\$ 29.67
BECK 362NR ^{™*}	10.1	1.5	63.2	\$.80	\$ 584.62	+\$ 5.85
BECK 357NR ^{™*}	<u>9.3</u>	<u>1.5</u>	<u>60.9</u>	\$.80	<u>\$ 563.12</u>	<u>-\$ 26.87</u>
AVERAGE	11.4	1.5	65.7		\$ 608.37	-\$ 8.54

[†]Bushels per acre corrected to 13% moisture.

^{*}XL[™] brand seed is distributed by Beck's Superior Hybrids, Inc. [™]XL is a trademark of Pioneer Hi-Bred.

[^]Net Return is based on 2,4 D-B cost and \$5.50 herbicide application cost.

Summary: The 2,4-DB treatments had no significant positive or negative yield effects. Upper canopy wilting was very evident following application, and at harvest the 2,4-DB treated plants exhibited slightly higher lodging rates than the non-treated checks. Plant heights were similar with the checks. The R2 growth stage application may have been too late to induce the desired effects. Next seasons tests will include applications at the late vegetative stage, before the onset of the reproductive phase.