

BECK'S Roundup Ready vs. Traditional Systems Study - 2004

Location: A8 plot
Planted: April 19, 2004
Harvested: September 15, 2004
Rows: 15" Rows

Seeding Rate 160,000 seeds/A.
Previous Crop: Corn
Tillage: V-Rip / S-tine
Herbicide: 2 pts. Dual II Magnum on
 Traditional Varieties
 22 oz. Roundup Weather Max
 on RR Varieties

RAINFALL	
April	1.2 in.
May	5.2 in.
June	7.4 in.
July	2.8 in.
August	<u>3.5 in.</u>
Total	20.1 in.

- Purpose:** We developed this study to compare the long-term effects of three different seed/herbicide systems:
- 1) All Roundup Ready System where Roundup Ready Corn and Roundup Ready Soybeans are used.
 - 2) Roundup Ready Soybeans and Traditional Corn System.
 - 3) All Traditional System where only Traditional Corn and Soybeans are used along with Traditional herbicides.

We will look at the long-term effects of each system on weed species, and weed control and their effects on yield. We will also compare other visual or measured observations as they appear (e.g. volunteer corn, and herbicide interaction with the corn/soybeans).

We also planted Cruiser-treated soybeans to compare this new seed-applied insecticide.

Yield Rank	Brand-Variety	Plant Height (IN.)	Pod Height (IN.)	Standability 1 = Erect 5 = Flat	Bushels* Per Acre
<u>ALL ROUNDUP READY SYSTEM</u>					
1	BECK 367NRR	28	3.0	1.5	72.9
2	BECK 375NRR Cruiser	30	3.0	1.4	62.9
3	BECK 323RR	29	3.0	1.3	61.5
4	BECK 295NRR	36	3.0	1.5	61.4
5	BECK 417NRR	28	3.0	1.3	55.5
6	BECK 375NRR	<u>29</u>	<u>2.0</u>	<u>1.4</u>	<u>54.1</u>
	AVERAGE	30	2.8	1.4	61.4
<u>ROUNDUP READY SOYBEANS / TRADITIONAL CORN SYSTEM</u>					
1	BECK 367NRR	29	2.0	1.4	67.5
2	BECK 417NRR	36	3.0	1.5	63.2
3	BECK 323RR	30	3.0	1.4	60.2
4	BECK 375NRR	32	2.0	1.5	57.1
5	BECK 375NRR Cruiser	32	2.0	1.5	53.9
6	BECK 295NRR	<u>27</u>	<u>2.0</u>	<u>1.4</u>	<u>53.0</u>
	AVERAGE	31	2.3	1.5	59.2
<u>ALL TRADITIONAL SYSTEM</u>					
1	BECK 419	44	3.0	1.6	70.0
2	BECK 359	30	2.0	1.4	68.7
3	BECK 379N	39	3.0	1.4	61.6
4	BECK 417NRR	<u>36</u>	<u>3.0</u>	<u>1.5</u>	<u>59.4</u>
	AVERAGE	37	2.8	1.5	64.9

*Bushels per acre corrected to 13% moisture.

Summary: While weed control was more difficult in the Traditional Soybeans, it did not appear to affect yield significantly since the Traditional Soybeans produced the highest yield in this one test. Since we are comparing unrelated genetic varieties in this year's soybean comparison, this is a true assessment of not only the herbicide effects, but also the genetic capability of the different systems.

When we rotate to corn next year, we will be able to analyze the same genetic family with or without the Roundup Ready trait.

This year's results are just the start of our long-term results that we hope to obtain after 5 to 10 or more years of research.

Cruiser-treated seed: The average of both reps indicate an advantage of about 7 bushels per acre in this test. The EPA registration label for Cruiser is expected in the Fall of 2004.

Cruiser is a registered trademark of Syngenta.

