

BECK'S Strip-Till vs. Conventional-Till Corn After Soybeans / Corn After Corn Studies – 2010

Location:	B2 & B3 plots	Previous Crop: CAB:	Soybeans
Planted:	April 14, 2010	CAC:	Corn
Harvested:	September 7, 2010	Tillage:	Strip-Till / Conv.-Till
Soil Type:	Clay Loam	Herbicide:	2.3 qts. Bicep II Magnum
Population:	33,674 seeds/A.		1 qt. Princep
Rows:	Four 30" rows		1.67 qts. Lexar
Replications:	Three (averaged)	Fertilizer Analysis:	300# 0-0-60
			200# 11-52-0

RAINFALL	
April	2.1 in.
May	4.5 in.
June	11.5 in.
July	4.2 in.
August	3.0 in.
Total	25.3 in.

Purpose: Strip-Till has become of interest to many farmers that want to reduce tillage and focus on the fertility in the zone where the crop is growing. This study compares strip-till to conventional-till in both corn after corn and corn after soybean environments.

CORN AFTER SOYBEANS

Brand	Lbs. of Dry Fert./A.	Harvested Population	Test [†] Weight	Percent Moisture	Bushels [†] Per Acre
STRIP-TILL (Banded Dry Fertilizer)					
BECK 6733HXR™*	500 lbs.	35,000	59.5	21.1	242.4
BECK 5676HXR™*	500 lbs.	33,000	60.5	19.7	234.7
BECK 5716A3	500 lbs.	35,500	56.7	17.8	226.5
BECK 5435HXR™*	500 lbs.	<u>35,500</u>	<u>62.2</u>	<u>16.9</u>	<u>225.6</u>
AVERAGE		<u>34,750</u>	<u>59.7</u>	<u>18.9</u>	<u>232.3</u>
BECK 6733HXR™*	330 lbs.	34,500	59.8	21.0	247.8
BECK 5676HXR™*	330 lbs.	33,500	59.1	19.8	226.5
BECK 5716A3	330 lbs.	34,500	55.7	18.8	222.4
BECK 5435HXR™*	330 lbs.	<u>33,500</u>	<u>61.3</u>	<u>17.5</u>	<u>210.8</u>
AVERAGE		<u>34,000</u>	<u>59.0</u>	<u>19.3</u>	<u>226.9</u>
BECK 5676HXR™*	0 lbs.	36,000	58.7	19.4	233.3
BECK 6733HXR™*	0 lbs.	34,000	60.6	20.9	229.3
BECK 5716A3	0 lbs.	33,500	57.1	20.0	227.8
BECK 5435HXR™*	0 lbs.	<u>35,500</u>	<u>61.3</u>	<u>17.9</u>	<u>215.6</u>
AVERAGE		<u>34,750</u>	<u>59.4</u>	<u>19.6</u>	<u>226.5</u>
Strip-Till Average		34,500	59.4	19.3	228.6

CONVENTIONAL-TILL (Broadcast Fertilizer)

BECK 6733HXR™*	500 lbs.	36,000	59.6	21.1	240.0
BECK 5716A3	500 lbs.	34,000	55.5	18.9	229.8
BECK 5676HXR™*	500 lbs.	34,500	61.2	20.0	224.5
BECK 5435HXR™*	500 lbs.	<u>35,500</u>	<u>62.3</u>	<u>17.8</u>	<u>217.0</u>
AVERAGE		<u>35,000</u>	<u>59.7</u>	<u>19.5</u>	<u>227.8</u>
BECK 5716A3	330 lbs.	35,500	55.9	19.2	232.5
BECK 6733HXR™*	330 lbs.	36,500	59.7	21.0	227.1
BECK 5676HXR™*	330 lbs.	33,000	59.5	19.2	225.9
BECK 5435HXR™*	330 lbs.	<u>36,000</u>	<u>61.1</u>	<u>17.4</u>	<u>216.9</u>
AVERAGE		<u>35,250</u>	<u>59.1</u>	<u>19.2</u>	<u>225.6</u>
BECK 6733HXR™*	165 lbs.	31,000	60.5	20.9	226.3
BECK 5716A3	165 lbs.	36,000	55.2	17.3	223.9
BECK 5676HXR™*	165 lbs.	34,000	59.5	19.5	222.9
BECK 5435HXR™*	165 lbs.	<u>34,500</u>	<u>61.5</u>	<u>17.1</u>	<u>214.6</u>
AVERAGE		<u>33,875</u>	<u>59.2</u>	<u>18.7</u>	<u>221.9</u>
Conventional-Till Average		34,708	59.3	19.1	225.1

BECK'S Strip-Till vs. Conventional-Till Corn After Soybeans / Corn After Corn Studies – Continued

CORN AFTER CORN

Brand	Lbs. of Dry Fert./A.	Harvested Population	Test [†] Weight	Percent Moisture	Bushels [†] Per Acre
<u>STRIP-TILL (Banded Dry Fertilizer)</u>					
BECK 5716A3	500 lbs.	35,500	56.2	18.0	169.6
BECK 5676HXR™*	500 lbs.	34,500	57.9	18.8	169.4
BECK 5435HXR™*	500 lbs.	34,000	60.3	17.7	162.7
BECK 6733HXR™*	500 lbs.	<u>33,500</u>	<u>57.9</u>	<u>20.2</u>	<u>141.1</u>
AVERAGE		34,375	58.1	18.7	160.7
BECK 5716A3	330 lbs.	34,000	54.8	18.1	175.4
BECK 5676HXR™*	330 lbs.	34,500	56.6	18.9	173.7
BECK 5435HXR™*	330 lbs.	30,500	59.8	17.6	171.9
BECK 6733HXR™*	330 lbs.	<u>33,500</u>	<u>58.5</u>	<u>21.2</u>	<u>163.0</u>
AVERAGE		33,125	57.4	19.0	171.0
BECK 5676HXR™*	0 lbs.	33,500	60.6	20.2	217.6
BECK 5435HXR™*	0 lbs.	32,500	61.2	17.4	208.6
BECK 5716A3	0 lbs.	33,000	55.3	18.0	201.1
BECK 6733HXR™*	0 lbs.	<u>33,000</u>	<u>58.6</u>	<u>20.2</u>	<u>185.5</u>
AVERAGE		33,000	58.9	19.0	203.2
Strip-Till Average		33,500	58.1	18.9	178.3
<u>CONVENTIONAL-TILL (Broadcast Fertilizer)</u>					
BECK 5676HXR™*	500 lbs.	34,000	59.4	19.6	228.1
BECK 5435HXR™*	500 lbs.	35,000	61.4	17.4	223.7
BECK 6733HXR™*	500 lbs.	33,000	60.9	21.0	219.8
BECK 5716A3	500 lbs.	<u>34,500</u>	<u>56.9</u>	<u>17.4</u>	<u>207.1</u>
AVERAGE		34,125	59.7	18.9	219.7
BECK 5716A3	330 lbs.	32,000	56.3	18.0	223.6
BECK 6733HXR™*	330 lbs.	32,000	59.8	20.7	222.1
BECK 5676HXR™*	330 lbs.	33,000	59.8	20.2	210.3
BECK 5435HXR™*	330 lbs.	<u>35,500</u>	<u>61.4</u>	<u>17.4</u>	<u>190.5</u>
AVERAGE		33,125	59.3	19.1	211.6
BECK 5716A3	165 lbs.	34,500	55.8	17.2	194.0
BECK 6733HXR™*	165 lbs.	33,000	60.3	17.3	187.7
BECK 5716A3	165 lbs.	35,000	59.6	20.2	185.5
BECK 5435HXR™*	165 lbs.	<u>33,500</u>	<u>57.4</u>	<u>19.1</u>	<u>174.7</u>
AVERAGE		34,000	58.3	18.5	185.5
Conventional-Till Average		33,750	59.1	18.8	205.6

[†]Bushels per acre and test weight corrected to 15% moisture.

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

Crop Rotation Summary: As we evaluate the yields, you can see that the corn after corn yields are less than the corn/bean yearly rotation. There are several items that might contribute to lower yields in a CAC setting. A few items that we have noticed are large amounts of fodder and stalks, which affect soil temperatures and emergence. We have also seen increased disease pressure and a need for a higher amount of N to feed the plant.

Tillage Summary: As an overall average, we see an advantage of 11.9 Bu./A. in conv.-till compared to strip-till across both crop rotations. The corn after corn section of strip-till seems to be the weak link in this study.

Fertilizer Summary: Interestingly enough, we found our highest yields in the highest fertilized areas except for the CAC strip-till section where we found the exact opposite; the highest yield came from the 0 lbs. fertilizer section.

Summary: One of the lessons learned is the importance of using auto-guidance technology with strip-till. Many of the areas strip-tilled in the fall were difficult to distinguish at planting time due to weathering and residue movement back into the strips. In addition, strip-tilled areas on sloping ground were more subject to erosion when the strip was located in an area where water ran. This created a non-uniform seed bed at planting time and erosion continued to occur.