

BECK'S Cover Crop Study - 2012

Location: H2 Plot **Previous Crop:** Various Cover Crop
Planted: April 24, 2012 **Tillage:** No-Till
Harvested: October 4, 2012 **Herbicide:** Burndown: 22 oz. Roundup PowerMAX®, 8 oz. 2,4-D
Population: 35,077 seeds/A. 32 oz. Roundup PowerMAX, 1 qt. Class Act
Rows: Four 30" rows Pre: 2.3 qt. Bicep & 1 qt. Princep
Replications: Three (averaged) Post: 1.67 qt. Lexar & 1 qt. Class Act
Product Tested: BECK 6733HXR™

RAINFALL	
April	2.83 in.
May	2.00 in.
June	1.47 in.
July	2.70 in.
August	4.49 in.
Total	13.49 in.

Purpose: This study was started to determine the benefits that cover crops provide to the following year's grain crop. Six cover crops were planted and replicated three times to show the different attributes of each.

Treatment	Application Rate/A.	Harvested Population	Percent Moisture	Bushels [†] Per Acre	Cost/A.	Net [^] Return
N-Vest® Soilbuilder Annual Ryegrass	15 lbs.	27,333	24.5	206.5	\$12.00	\$1,206.35
Soybean Bean Builder Mix	18 lbs.	28,833	23.9	189.9	\$21.60	\$1,098.81
Austrian Winter Peas	35 lbs.	31,667	23.7	182.4	\$35.00	\$1,041.16
GroundHog™ Radish	5 lbs.	30,500	23.7	176.8	\$13.00	\$1,030.12
Crimson Clover	25 lbs.	30,333	23.1	169.6	\$35.00	\$965.64
Corn Champion Mix	15 lbs.	29,833	23.1	164.1	\$27.90	\$940.29
AVERAGE		29,750	23.7	181.5	\$24.08	

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

*XL® brand seed is distributed by Beck's Superior Hybrids, Inc. XL® is a registered trademark of DuPont Pioneer.

[^]Net return based on gross return minus cost/A. of cover crop.

GroundHog radish is a trademark of Ampac Seed Company. N-Vest is a registered trademark of the Cisco Company. Roundup PowerMAX is a registered trademark of Monsanto Technology LLC.

GroundHog™ Radish: This radish produces large root masses that can shatter compaction and scavenge nitrogen and nutrients deep within the soil. Radishes can capture up to 150 - 200 lbs. of nitrogen before winter killing.

Beck's Corn Champion Mix: A combination of Crimson Clover, GroundHog Radish and Appin Turnips. This mix has the ability to produce, store, and release large amounts of nitrogen while also breaking up layers of compaction.

Crimson Clover: An aggressive clover that overwinters well and has the ability to produce large amounts of nitrogen.

Beck's Soybean Bean Builder Mix: A combination of annual ryegrass, GroundHog Radish and Appin Turnips. This mix is a combination of fibrous roots and tubers, which allows the Soybean Bean Builder Mix to break up layers of compaction.

N-Vest® Soilbuilder Annual Ryegrass Blend: A combination of two deep rooted annual ryegrass varieties with exceptional winter hardiness.

Summary: Due to the mild weather conditions that we experienced this winter the cover crops continued to grow longer into the winter and spring. This allowed them to grow larger than normal, which was a good thing so they could contribute more organic material and nitrogen back into the soil. However, it posed an issue because they were harder to kill and took longer to decompose. Since this is a no-till field that has firm soils, we expected to see a larger response from the tillage action of the radishes. We saw the largest yield increase of 25 Bu./A. compared to the plot average with the use of Annual Ryegrass. We plan to make this into a multi-year study to continue to evaluate the benefits of cover crops.