



Corn Trait / Population Study – 2009

Planted: May 11, 2009
Harvested: October 29, 2009
Soil Type: Ipava Silt Loam
Population: Various
Rows: Four 30" rows

Previous Crop: Soybeans
Tillage: Chisel / Field Cultivator
Herbicide: 3 qts. Degree Xtra
 32 oz. Credit Extra
Insecticide: Aztec 2.1G

RAINFALL	
April	10.0 in.
May	4.9 in.
June	4.6 in.
July	4.0 in.
August	<u>3.6 in.</u>
Total	27.1 in.

Purpose: Improved genetics and insect protection traits may allow farmers to improve yields by simply planting higher populations. This study compares RR to Triple-Stack hybrids at 30,000, 33,000 and 36,000.

Brand	Planted Population	Percent Moisture	Bushels [†] Per Acre	\$ Net Return Per Acre [^]	\$/A. Advantage vs. 30,000 ^{^^}	Yield Advantage HXR/VT3
BECK 5135RR ^{TM*}	30,000	25.9	220.8	\$709.74		
BECK 5135RR ^{TM*}	33,000	25.6	223.8	\$713.40	+\$3.66	
BECK 5135RR ^{TM*}	36,000	<u>25.2</u>	<u>223.4</u>	\$704.70	-\$5.04	
AVERAGE		25.6	222.7			
BECK 5135HXR ^{TM*}	30,000	26.4	220.7	\$696.36		
BECK 5135HXR ^{TM*}	33,000	26.6	228.4	\$714.22	+\$17.86	
BECK 5135HXR ^{TM*}	36,000	<u>26.2</u>	<u>232.2</u>	\$718.05	+\$21.69	
AVERAGE		26.4	227.1			+4.4
BECK 5676RR ^{TM*}	30,000	29.6	188.4	\$599.68		
BECK 5676RR ^{TM*}	33,000	30.1	184.6	\$579.74	-\$19.94	
BECK 5676RR ^{TM*}	36,000	<u>30.0</u>	<u>184.2</u>	\$571.88	-\$27.80	
AVERAGE		29.9	185.7			
BECK 5676HXR ^{TM*}	30,000	30.5	196.0	\$607.36		
BECK 5676HXR ^{TM*}	33,000	30.2	204.9	\$629.75	+\$22.39	
BECK 5676HXR ^{TM*}	36,000	<u>30.6</u>	<u>210.1</u>	\$638.44	+\$31.08	
AVERAGE		30.4	203.7			+18.0
BECK 6733RR ^{TM*}	30,000	29.8	218.4	\$707.94		
BECK 6733RR ^{TM*}	33,000	29.8	229.0	\$739.55	+\$31.61	
BECK 6733RR ^{TM*}	36,000	<u>30.0</u>	<u>223.5</u>	\$713.37	+\$5.43	
AVERAGE		29.9	223.6			
BECK 6733HXR ^{TM*}	30,000	30.8	216.0	\$686.08		
BECK 6733HXR ^{TM*}	33,000	31.6	219.9	\$691.13	+\$5.05	
BECK 6733HXR ^{TM*}	36,000	<u>30.6</u>	<u>229.7</u>	\$717.07	+\$30.99	
AVERAGE		31.0	221.9			-1.7
BECK 5608RR	30,000	30.0	191.0	\$602.52		
BECK 5608RR	33,000	30.1	195.1	\$610.20	+\$7.68	
BECK 5608RR	36,000	<u>29.4</u>	<u>198.9</u>	\$616.50	+\$13.98	
AVERAGE		29.8	195.0			
BECK 5608VT3	30,000	29.7	183.9	\$560.51		
BECK 5608VT3	33,000	29.9	194.6	\$588.84	+\$28.33	
BECK 5608VT3	36,000	<u>29.9</u>	<u>213.7</u>	\$647.55	+\$87.04	
AVERAGE		29.8	197.4			+2.4

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

*XL Brand is distributed by Beck's Superior Hybrids, Inc.

[^]Net return/acre calculated at yield times \$3.60/Bu. less \$14.00/A. insecticide cost (if applied), less 2009 seed corn prices with typical discounts.

^{^^}The \$/A. Advantage versus 30,000 population shows the difference in return versus the return for 30,000 planting population.



Corn Trait / Population Study – Continued

Summary: Due to both above and below ground insect protection, this study proves that triple-stack corn hybrids can be planted at higher planting populations to increase both yield and net returns. On average, by increasing triple-stack planting populations to 36,000 seeds/A., yields increased by 17.2 Bu./A. and net returns improved by nearly \$43/A.

Roundup corn versions maximized yields and net returns at the 33,000 seeds/A. population. By increasing planting populations from 30,000 to 33,000, yields increased by 5.7 Bu./A. and net returns by only \$3.40/A. When plant populations were increased even higher to 36,000 seeds/A., yields lowered by 0.6 Bu./A. and net returns fell nearly \$10/A.



Triple Stack with Soil Applied Insecticide – 2009

Planted: May 24, 2009
Harvested: November 7, 2009
Rows: Six 30" rows
Seeding Rate: 34,000 seeds/A.
Replications: Two (averaged)

Previous Crop: Corn
Tillage: Chisel / Field Cultivator
Herbicide: 1.75 pts. SureStart
 32 oz. Credit Extra
Product Tested: BECK 5716A3

RAINFALL	
April	10.0 in.
May	4.9 in.
June	4.6 in.
July	4.0 in.
August	<u>3.6 in.</u>
Total	27.1 in.

Purpose: To evaluate the yield performance of two popular soil-applied insecticides (SAI) on triple stack corn. This trial studies any yield enhancements from the result of additional insect protection, particularly corn rootworm and secondary insects.

Treatment	Percent Moisture	Test [†] Weight	Bushels [†] Per Acre	+/- Control
Control	31.1	56.7	225.6	
Force CS	31.1	56.7	226.3	+0.7
Counter 15G	<u>31.1</u>	<u>56.6</u>	227.2	+1.6
AVERAGE	31.1	56.7		

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

Summary: Soil applied insecticides were applied at two-thirds rates and if these products would cost on average \$10/A., they would need a 2.8 Bu./A. yield increase to pay for themselves. Both products responded with under 2 Bu./A. yield increases to offer net losses from SAI treatments.

Corn rootworm levels were very low due to multiple years of saturated soils, which may have lead to lower egg hatch and larval survival. In other studies at the Central IL PFR Center, SAI treatments did not offer a return on investment due to low insect populations.

"Thanks for giving farmers' a choice when it comes to technologies especially, the Herculex technologies. Our area has been hit hard by the Western Bean Cutworm and if Beck's didn't offer choices in traits then farmers would be forced into a company that doesn't provide them with the overall package that Beck's does."

Tom DeYoung
 Saint Anne, IL



Herculex Xtra ear on left (no damage)
 VT3 ear on right shows Western Bean Cutworm damage.