



2017 FANTASY FARMING CHALLENGE

TRIAL OVERVIEW

- In 2013, the Monsanto Learning Center at Monmouth, IL created an educational competition opportunity (Fantasy Farming Challenge) for high school agricultural programs in the area. The Fantasy Farming Challenge program has grown each year and in 2017, 18 Illinois schools participated. The program provides an opportunity for hundreds of students to learn more about crop production and the agriculture industry.
- In February, students in the participating schools attended a presentation to learn about basic corn production, the key decisions a grower must make every season, and the risks and costs associated with those decisions.
- The participating students from each school designed a corn plot and based on their decisions, the plot was planted at the Monsanto Learning Center by their staff.
- During the growing season, each school took a field trip to the Monsanto Learning Center to review their plot, learn more about agronomy, and be introduced to career opportunities in agriculture.
- A Fantasy Farming Challenge achievement award was given to the school that achieved the highest yield and to the school that produced the highest profit based on their agronomic and production decisions.



Figure 1. Fantasy Farming Challenge Plot

RESEARCH OBJECTIVE

- Students from each participating school were to design a corn plot based on key agronomic and financial decisions that help maximize yield potential and net profitability. Decisions included the determinations of:
 - Corn product selection from a list of several genetic families and trait packages.
 - Should a soil-applied insecticide be used?
 - Planting time (Early, Mid, or Late).
 - Row spacing for the plot (20 or 30 inches).
 - Planting rate (seeds/acre).
 - Timing (Preplant, or split application) and rate (lbs/acre) of nitrogen to be applied.
 - Should a foliar fungicide be considered?
 - Variable and fixed costs associated with their decisions.
- Plots are to be harvested, the grain adjusted to 15% moisture content and sold on the cash market at harvest to determine yields and net profit/acre.

School	Yield @ 15% (bu/acre)	Net Profit (\$)	Product Relative Maturity (RM)	Trait	Soil Applied Insecticide? (Y/N)	Seeding Rate (000's)	Row Spacing	Nitrogen Rate (lbs/acre) (Pre-plant/Sidedress)	Planting Date	Foliar Fungicide? (Y/N)
Monmouth-Roseville	304.0	18.83	116	SmartStax® RIB Complete® corn blend	N	42	20	80/200	5/10	Y
Eureka	299.0	87.94	114	SmartStax® RIB Complete® corn blend	N	36	30	85/100	5/10	Y
United	291.6	53.14	114	SmartStax® RIB Complete® corn blend	N	40	20	140/60	4/21	Y
Farmington	290.8	90.91	114	SmartStax® RIB Complete® corn blend	N	37	30	150/50	4/21	N
AlWood	290.3	82.59	114	SmartStax® RIB Complete® corn blend	N	39	30	230/0	5/10	N
West Central	290.2	43.14	114	SmartStax® RIB Complete® corn blend	N	36	30	150/100	4/21	Y
Stark County	288.4	36.57	117	VT Double PRO® RIB Complete® corn blend	Y	38	30	125/125	4/21	Y
Galva	284.6	52.52	114	SmartStax® RIB Complete® corn blend	Y	38	30	130/70	5/10	N
Sherrard	284.2	65.62	114	SmartStax® RIB Complete® corn blend	N	38	20	160/60	4/21	N
VIT	276.6	36.79	114	SmartStax® RIB Complete® corn blend	N	37	20	100/150	5/10	N
Abingdon-Avon	274.8	86.30	111	VT Double PRO® RIB Complete® corn blend	N	37	30	160/80	4/21	N
Mercer County	271.3	44.11	112	Genuity® VT Triple PRO® RIB Complete® corn blend	N	35	30	90/135	4/21	Y
Spoon River Valley	262.9	50.21	114	SmartStax® RIB Complete® corn blend	N	37	20	100/70	4/21	N
ROWVA	257.6	41.57	114	SmartStax® RIB Complete® corn blend	N	37	20	80/80	4/21	N
Orion	256.6	13.84	114	SmartStax® RIB Complete® corn blend	N	36	20	110/40	4/21	Y
Geneseo	254.0	36.87	112	Genuity® VT Triple PRO® RIB Complete® corn blend	N	36	30	120/80	4/21	N
Rockridge	251.3	(2.85)	112	Genuity® VT Triple PRO® RIB Complete® corn blend	N	38	20	115/60	4/21	Y
Cambridge	246.7	(59.71)	108	SmartStax® RIB Complete® corn blend	Y	35	30	130/90	4/21	Y

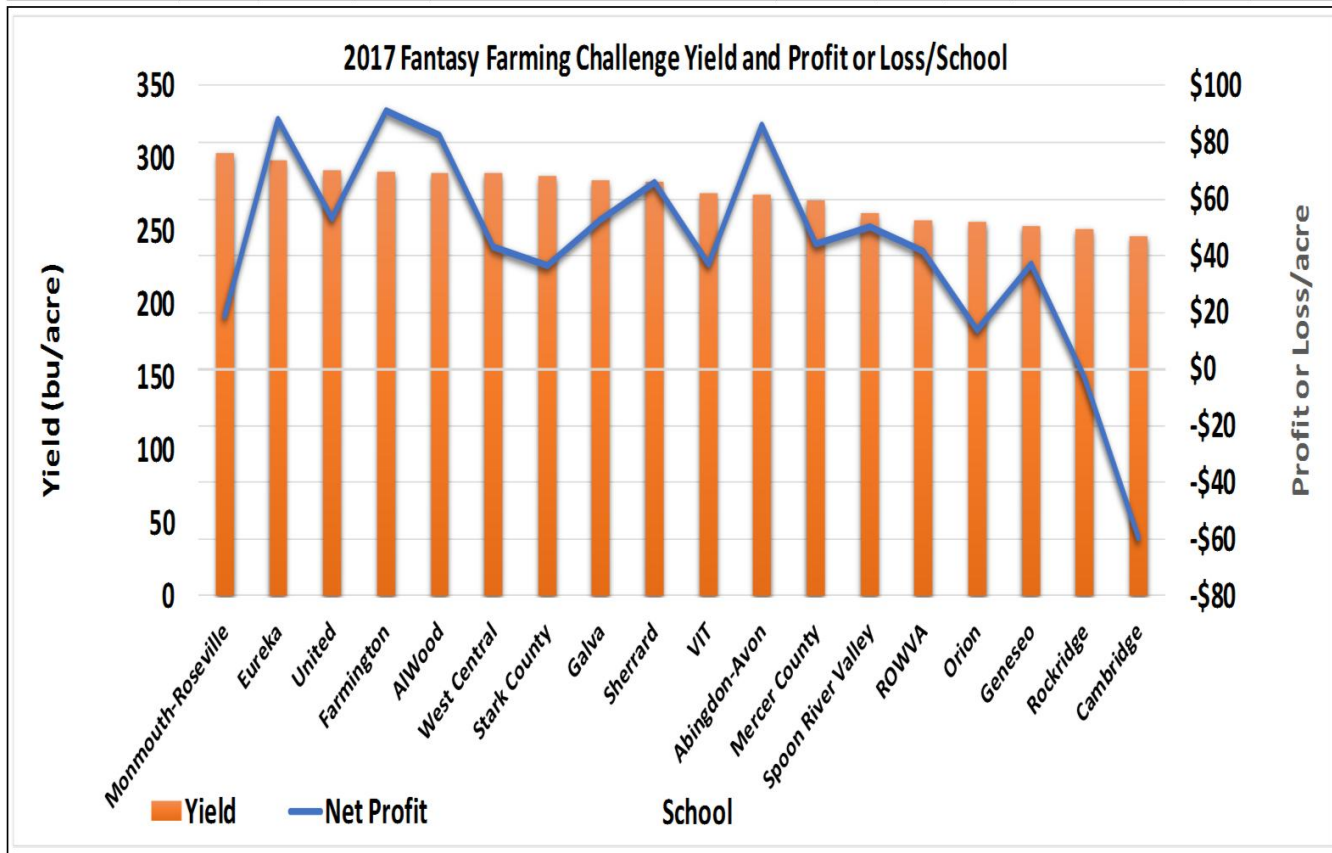


Figure 2. (Top) Yields, net profitability, and input decisions made by each school. Planting date choices were early (4/21), mid (5/10), and a later date that was not selected by any school. (Bottom) Yield and net profit for each school.

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Monmouth, IL	Silt Loam	soybean	Conventional		10/05/2017		See Figure 2

UNDERSTANDING THE RESULTS

- Four of the schools (United, Farmington, AlWood, and West Central) were within 1.4 bu/acre (291.6 - 290.2) of each other in regard to yield (Figure 2). However, they were separated by as much as \$47.77 (\$90.1 - \$43.14) in profitability (Figure 2).
- The school with the highest yielding plot (Monmouth-Roseville High School) was 15th out of the 18 participating schools in regards to profitability. The school also produced the highest yielding plot in the 2015 Fantasy Farming Challenge.



- The school with the most profitable plot (Farmington High School) did not have the lowest cost/acre because the students did not cut back on seed or nitrogen inputs.




WHAT DOES THIS MEAN FOR YOUR FARM?

- Farmers must evaluate each agronomic and financial input that they can control as well as costs and production risks that are out of their control prior to planting a crop to help establish a crop production budget with a realistic projection of net income/acre.

LEGAL STATEMENT

For additional agronomic information, please contact your local brand representative.
Developed in partnership with Technology Development & Agronomy by Monsanto.

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship. **B.t. products** may not yet be registered in all states. Check with your Monsanto representative for the registration status in your state. **IMPORTANT IRM INFORMATION: RIB Complete®** corn blend products do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. SmartStax® RIB Complete® corn blend is not allowed to be sold for planting in the Cotton-Growing Area. **See the IRM/Grower Guide for additional information. Always read and follow IRM requirements. Individual results may vary,** and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible. **ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.** Roundup Ready technology contains genes that confer tolerance to glyphosate, an active ingredient in Roundup® brand agricultural herbicides. Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Genuity®, RIB Complete®, Roundup Ready®, Roundup®, SmartStax®, VT Double PRO® and VT Triple PRO® are trademarks of Monsanto Technology LLC. LibertyLink® and the Water Droplet Design® is a registered trademark of Bayer. Herculex® is a registered trademark of DowAgroSciences LLC. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. All other trademarks are the property of their respective owners. ©2017Monsanto Company All Rights Reserved. 171013115229 121217LGM

 <p>Insect Resistance Management Planting Refuges, Preserving Sustainability</p>	<p>Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, including applicable refuge requirements for insect resistance management, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.</p>	 <p>RESPECT THE REFUGE</p>	 <p>Roundup Ready 2 TECHNOLOGY LIBERTY LINK</p>
--	---	---	--