

2013

## ISU FARM Network: North Central

Micah B. Smidt

*Iowa State University*, [mbsmidt@iastate.edu](mailto:mbsmidt@iastate.edu)

Follow this and additional works at: [http://lib.dr.iastate.edu/farms\\_reports](http://lib.dr.iastate.edu/farms_reports)



Part of the [Agricultural Science Commons](#), and the [Agriculture Commons](#)

---

### Recommended Citation

Smidt, Micah B., "ISU FARM Network: North Central" (2013). *Iowa State Research Farm Progress Reports*. 1961.  
[http://lib.dr.iastate.edu/farms\\_reports/1961](http://lib.dr.iastate.edu/farms_reports/1961)

This report is brought to you for free and open access by Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State Research Farm Progress Reports by an authorized administrator of Iowa State University Digital Repository. For more information, please contact [digirep@iastate.edu](mailto:digirep@iastate.edu).

---

## ISU FARM Network: North Central

### **Abstract**

The North Central and Northeast Iowa Farmer Assisted Research and Management (FARM) project is in its first year of conducting on-farm research in area farmer cooperator fields. FARM is an expansion of Northwest Iowa On-Farm Research with locations in Northwest, West Central, Central, Southwest, and Southeast, Iowa. These are field scale, replicated, and randomized trials. Trial ideas come from farmer cooperators, field and campus specialists, as well as agribusinesses. The FARM project was established to help farmers answer crop production questions and better manage their fields.

### **Disciplines**

Agricultural Science | Agriculture

## ISU FARM Network: North Central

### RFR-A1262

Micah Smidt, agricultural specialist

#### Introduction

The North Central and Northeast Iowa Farmer Assisted Research and Management (FARM) project is in its first year of conducting on-farm research in area farmer cooperator fields. FARM is an expansion of Northwest Iowa On-Farm Research with locations in Northwest, West Central, Central, Southwest, and Southeast, Iowa. These are field scale, replicated, and randomized trials. Trial ideas come from farmer cooperators, field and campus specialists, as well as agribusinesses. The FARM project was established to help farmers answer crop production questions and better manage their fields.

In 2012, 14 projects were conducted with 13 cooperators from Hancock, Wright, Worth, Cerro Gordo, Kossuth, and Floyd counties. Results of all the projects have been published in a FARM booklet and are available at the Northern Research Farm in Kanawha, and local ISU Extension offices. Trials conducted in North Central and Northeast included citric acid for Goss' Wilt, corn fungicides, land rolling for soybeans, foliar micronutrients on soybeans, and winter rye cover crop termination timing. The rye cover crop termination study is discussed in this article.

In 2011 producers in the Mississippi River Basin Initiative (MRBI) project in the southern part of Wright County had problems terminating the rye cover crop. An application of glyphosate was applied to terminate the rye in the spring before planting, but the rye did

not die due to cold weather. The objective was to see if there was a yield advantage to terminating the rye at various timings.

#### Materials and Methods

A treatment application of glyphosate in early spring was made to the rye about one month before corn planting, and another treatment was applied about two weeks before corn planting. Both trials were previously soybeans (2011) going to corn. The treatments were field length strips randomized and replicated four times. Buffer strips were implemented between the early and late treatments. A John Deere 6000 sprayer was used to apply the treatments. The farmer's equipment was used to plant and harvest corn. Yield data was collected by either a calibrated yield monitor or a grain cart with a scale.

#### Results and Discussion

Table 1 shows the variety, row spacing, planting date, plant population, previous crop, and tillage practice implemented. Table 2 details yield average for each treatment by location. Both locations showed a positive yield response to the early treatment of glyphosate. Location 1 showed significant yield response to the early treatment.

#### Acknowledgements

Thanks to Rick Lee and Arliss Nielsen for their participation in this trial. Thanks to all the other farmer cooperators for making FARM a successful first year. FARM would also like to thank the Iowa Soybean Association and Ag Ventures Alliance for their financial support of this new program.

**Table 1. Variety, row spacing, planting date, plant population, previous crop, and tillage in 2012.**

Trial	Variety	Row spacing (in.)	Planting date	Plant population	Previous crop	Tillage
				(seeds/acre)		
1	DK 58-83	30	4/27/2012	36,000	Soybean	No-till
2	DK 53-78 RIB	30	4/23/2012	34,018	Soybean	No-till

**Table 2. Yield data from cover crop termination timing trials in 2012.**

Trial	Burnoff timing	Yield <sup>1</sup>	P-value	Difference	Significance
		(bu/acre)		(bu/acre)	
1	3/28/2012	171.1	0.03	9	**
	4/18/2012	162.1			
2	4/4/2012	144.7	0.13	12.9	NS
	4/11/2012	131.8			

<sup>1</sup>All yields adjusted to 15.5% moisture.

\*\* = statistically different,  $P < 0.05$ .

NS = not statistically different,  $P > 0.05$ .