2006

Northwest Iowa On-Farm Research

Joel L. DeJong
Iowa State University, jldejong@iastate.edu

Joshua L. Sievers
Iowa State University, sieversj@iastate.edu

Northwest Iowa On-Farm Research

Abstract
Production agriculture faces many changes from year to year. These changes provide producers with potentials of better crops, better yields, and more profit. Often a producer asks, "How much is this new changing technology going to be beneficial to my operation?" Through a cooperative effort, the Iowa State University Research and Demonstration Farms, Iowa State University Extension, and the Northwest Iowa Experimental Association have formed a new pilot program known as the Northwest Iowa On-Farm Research Project. The counties of Sioux, Lyon, Osceola, and Buena Vista are the focus of this project. These counties are the most affected by the discontinuation of research at the Doon Farm. This project has been established to keep research ongoing for northwest Iowa and to help farmers answer important questions that relate to their farming practices. This project will be an effective tool for providing extension staff with information to answer some of these questions. In particular, results will be shared with the cooperators and other producers in the area to determine if yield responses vary from county to county.

Disciplines
Agricultural Science | Agriculture

Northwest Iowa On-Farm Research

Joel DeJong, field crops specialist
ISU Extension
Josh Sievers, agricultural research specialist

Introduction

Production agriculture faces many changes from year to year. These changes provide producers with potentials of better crops, better yields, and more profit. Often a producer asks, "How much is this new changing technology going to be beneficial to my operation?" Through a cooperative effort, the Iowa State University Research and Demonstration Farms, Iowa State University Extension, and the Northwest Iowa Experimental Association have formed a new pilot program known as the Northwest Iowa On-Farm Research Project. The counties of Sioux, Lyon, Osceola, and Buena Vista are the focus of this project. These counties are the most affected by the discontinuation of research at the Doon Farm. This project has been established to keep research ongoing for northwest Iowa and to help farmers answer important questions that relate to their farming practices. This project will be an effective tool for providing extension staff with information to answer some of these questions. In particular, results will be shared with the cooperators and other producers in the area to determine if yield responses vary from county to county.

Materials and Methods

Conventional farm equipment was used to for the experiment. A weigh wagon or a yield monitor from a combine was an effective data collection tool. The project was designed to compare three side-by-side field-length strips to give a quality representation of each strip and to allow statistical analysis of the data. In cases where a liquid treatment was being applied, buffer strips of two to four rows were used to eliminate drift to untreated plots.

Results and Discussion

In the 2005 growing season, cooperators from Lyon, Osceola, Sioux, and Buena Vista counties participated in two different soybean trials. In Buena Vista County, four types of fungicides were used in triple-replicated plots. Treatments of Warrior, Headline, foliar fertilizer (16–18–3), and two different replications of Domark were applied in three replications against an untreated check on July 15 (R2 stage). Table 1 details yield, moisture, and replication average for each treatment. Soybeans treated with Cruiser were the focus on an on-farm experiment in Sioux County. Three replications yielded the results shown in Table 2. In Osceola County, a triple-replicated study of ApronMax-treated versus an untreated soybean check is shown in Table 3.

Acknowledgments

We would like to thank Russel Glade, Gary Trei, Jim Hultgren, and Bruce Zommermaand for their cooperation in the 2005 on-farm research. Cooperators for the 2006 growing season are still being recruited for on-farm research projects. For more information contact Joel DeJong jldejong@iastate.edu or Josh Sievers sieversj@iastate.edu.

Table 1. Comparisons of soybean fungicides in Buena Vista County.

Treatment	Yield (bu/acre)[1]		Moisture (%)	
Foliar	Treated	Check	Treated	Check
fertilizer	76.05	76.71	11.9	11.9
(2 qt/acre)	79.10	76.35	12.0	11.9
	79.17	76.38	12.0	12.0
Average yield	78.10	76.48		

[1]LSD=4.92, not significant.

Headline	Treated	Check	Treated	Check
(6 oz/acre)	76.18	77.56	12.0	11.8
	78.24	73.77	12.0	11.9
	76.55	72.75	12.1	11.9
Average yield	76.99	74.69		

[1]LSD=7.95, not significant.

Warrior	Treated	Check	Treated	Check
(3.2 oz/acre)	74.88	76.19	12.0	11.9
	77.86	75.06	12.0	11.9
	78.77	78.34	12.0	11.8
Average yield	77.17	76.53		

[1]LSD=5.12, not significant.

Domark	Treated	Check	Treated	Check
(5 oz/acre)	70.44	73.40	11.8	11.8
	71.94	68.77	12.0	11.8
	69.34	69.86	12.0	11.7
Average yield	70.57	70.68		

[1]LSD=7.67, not significant.

Domark	Treated	Check	Treated	Check
(5 oz/acre)	76.70	74.96	11.7	11.9
	74.20	75.35	12.0	12.0
	77.49	74.29	12.0	11.9
Average yield	76.13	74.87		

[1]LSD=5.50, not significant.

Note: P=0.05. Entire plots were treated with Warrior for aphids.

Table 2. Comparison of Cruiser-treated soybeans in Sioux County.

Treatment	Yield (bu/acre)[1]	
Cruiser	Treated	Check
(5 oz/acre)	69.4	70.8
	69.8	71.4
	70.0	72.0
Average yield	69.7	71.4

[1]LSD=0.8, P=0.05

Table 3. Comparison of ApronMax-treated soybeans in Osceola County.

Treatment	Yield (bu/acre)[1]		Moisture (%)	
ApronMax	Treated	Check	Treated	Check
	47.13	51.43	9.86	9.92
	53.26	52.68	9.89	9.94
	54.25	48.03	9.90	9.89
Average yield	51.54	50.71		

[1]Not significant, P=0.05