

2010

Northern Research Farm Summary

David Rueber

Iowa State University, drueber@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/farms_reports



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

Recommended Citation

Rueber, David, "Northern Research Farm Summary" (2010). *Iowa State Research Farm Progress Reports*. 405.
http://lib.dr.iastate.edu/farms_reports/405

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.

Northern Research Farm Summary

Abstract

Includes:

Farm and Weather Summary

Keywords

RFR A9112

Disciplines

Agricultural Science | Agriculture

Northern Research Farm Summary

RFR-A9112

North Central Iowa Research Association, 2009-2010

Executive Board

President.....	Dennis Schwab
Vice President.....	Aaron Thompson
Secretary	Mervin Krauss
Treasurer	Paul Christians

Directors

Harley Kreitlow
Dennis Schwab
Mervin Krauss
Paul Christians
Ronald Christians
Cliff Howlett
Donald Latham
Aaron Thompson
George Guenther
Larry Draves

Iowa State University Staff

Research Farm Superintendent.....	David Rueber
Research and Demonstration Farms Coordinator.....	Mark Honeyman 32 Curtiss Hall
Research and Demonstration Farms Manager	Dennis Shannon 32 Curtiss Hall

Farm and Weather Summary

David Rueber, farm superintendent

Farm Comments

Field days and tours. Two field day events were held. A total of 979 people visited the farm in 2009.

New projects. Corn head adjustment, M. Hanna; Soybean seed treatment, Northern Research Farm; Pelletized manure, J. Holmes; Soybean variety trial, Northern Research Farm.

Crop Season Comments

Corn planting began on April 22 but was not completed until May 19 because of many rain delays. Harvest began October 26 and was completed November 13 with average yields of 170 to 180 bushels/acre. The grain moisture was higher than usual.

Soybean planting began on May 4 and was completed May 21. Harvest ran from September 29 through October 19 with average yields of 45 to 55 bushels/acre.

Weather Comments

Winter 2008–2009. March subnormal temperatures delayed the thawing of the ground until March 30. Abundant March rainfall raised the ground water level above the 4-ft tile lines on March 24. The ground water level stayed near or above the 4-ft level until July 27 which was more than a month later than normal.

Spring. The last measurable spring snow fell on April 5. On April 10 the last hard spring frost occurred when the temperature fell to 26°F. Cooler than normal May and June temperatures slowed crop development. Numerous June rains made hay harvesting difficult.

Summer. Below normal July and August temperatures further slowed crop development. Soybean aphids reached the economical treatment threshold the second week in August and most soybeans were sprayed to control them.

Fall. In late September, some late-planted corn died prematurely due to root rot. The first killing frost occurred on October 11 when the temperature reached 21°F. The cool, wet October weather slowed field drying of corn and hindered soybean harvesting. Combining corn on the damp ground compacted the soil. Field work ended on December 1. At the time this article was written, February 4, 2010, the ground has been continuously covered with snow since a December 3 snowfall of 5.3 in., which has limited frost penetration.

Acknowledgements

Thanks to Farm Credit Services of America, Gold-Eagle Cooperative, Golden Harvest Seeds, Kanawha Equipment, Max Yield Cooperative, Monsanto Company, North Central Cooperative, and Thomas Burk for support of work done at the farm.

Table 1. Northern Research and Demonstration Farm, Kanawha, IA, monthly rainfall and average temperatures for 2009

Month	<u>Rainfall (in.)</u>		<u>Temperature (°F)</u>		Days 90° or above
	2009	Deviation from normal	2009	Deviation from normal	
March	3.25	1.26	36.2	-1.7	0
April	3.88	0.64	47.5	0.6	1
May	5.37	1.54	58.7	-1.4	0
June	3.36	-1.45	68.0	-1.4	2
July	4.86	0.91	68.3	-4.6	0
August	1.97	-2.03	68.5	-2.0	0
September	2.70	-0.50	64.7	2.3	0
October	<u>7.42</u>	<u>5.22</u>	44.7	-5.8	<u>0</u>
Totals	32.78	5.59			3

Information on Experiments in Previous Annual Progress Reports

	Year
Effect of Potassium Fertilizer and New Corn Hybrids on Yield and Potassium uptake in Continuous Corn	08
Influence of Date of Planting on Corn Hybrids with/without Bt Corn	
Rootworm Protection	08
Early-season Weed Competition in Corn	08
Soybean Sudden Death Syndrome Field Screening.....	08
Fungicide-Insecticide Study on Soybean.....	08
Strawberry Demonstration	08
Soybean Planting Date and Growth and Development Study	07
Low Linolenic Acid Soybean Variety Trial.....	07
Grain Yield, Phosphorus Removal, and Soil Phosphorus Long-term Trends as Affected by Fertilization and Placement Methods in Corn-Soybean Production.....	07
Corn and Soil Responses to N, P, K, and Lime in Continuous Corn Production	07
Seasonal and Rotational Influences on Corn Nitrogen Requirements.....	07
Comparison of ESN and Aqua Ammonia as Sources of Fall- and Spring-applied N Fertilizer for Corn Production.....	07
Soybean Yield Response to Headline Fungicide Applications.....	07
Small Grain Demonstration Plots	06
Corn Planting Date.....	06
Potassium Fertilization Rate Effects on Soil-test Potassium and Yields of Corn and Soybeans	06
Transgenic Seed Corn Evaluated for Corn Rootworm Management	06
Role of Preemergence Herbicides in Roundup Ready® Soybeans	05
Grain Yield of Corn, Soybeans, and Oats as Affected by Crop Rotation and Nitrogen Fertilization for Corn	05
Soybean Yield Response to Headline Fungicide Applications.....	05
Distance to Water Table.....	05
Effects of Fungicides Seed Treatments on Seedling Diseases and Yield of Soybeans	05

Research Farm Projects

Research Project

Biological control of soy aphids
 Corn breeding
 Corn planting date
 Corn green snap
 Corn hybrid by cropping system
 Corn hybrids by N and K fertility
 Crop rotation and N rates
 Corn hybrid by K rates
 Crop residue and K release
 Long term K fertilizer for corn and soybean
 P fertilizer for corn-alfalfa rotation
 Placement methods for K for corn and soybean
 Placement methods for P for corn and soybean
 Eggshell as lime
 Pellitizer manure
 Different genetic sources of SCN resistance
 Seasonal and rotational influence on corn N requirements
 Specialty soybean test
 Soybean planting date and growth and development
 Soy disease resistance breeding
 Soybean SDS breeding
 Crop rotation and tillage systems
 USA national phenology network
 Tree biomass production
 Populus breeding
 Rust sentinel plot
 Phytophthora soy micro plots
 Demonstration shrub row
 Weed identification garden
 Long term P fertilizer for corn and soy
 Cornhead adjustment
 Home demonstration garden
 Soybean seed treatment
 Soybean variety trial

Project Leader

M. O'Neal
 K. Lamkey
 R. Elmore
 R. Elmore
 R. Elmore
 A. Mallarino
 A. Mallarino
 A. Mallarino
 A. Mallarino
 A. Mallarino
 A. Mallarino
 A. Mallarino
 A. Mallarino
 J. Holmes
 J. Holmes
 G. Tylka
 J. Sawyer
 W. Fehr
 P. Peterson
 S. Cianzio
 S. Cianzio
 M. Al-Kaisi
 M. Schwartz
 J. Randall
 R. Hall
 X. B. Yang
 A. Robertson
 C. Haynes
 NIRF*
 NIRF*
 M. Hanna
 C. Haynes
 NIRF*
 NIRF*

*Northern Iowa Research Farm