

2011

Northern Research Farm Summary

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Northern Research Farm Summary

Abstract

Includes Farm and Weather Summary, Information on Experiments in Previous Annual Progress Reports and Research Farm Projects.

Keywords

RFRA1096

Disciplines

Agricultural Science | Agriculture

Northern Research Farm Summary

RFR-A1096

North Central Iowa Research Association, 2010–2011

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Farm and Weather Summary

David Rueber, farm superintendent

The last measurable spring snow fell on March 19.

Farm Comments

Field Days and Tours. Three field day events were held. A total of 809 people visited the farm in 2010.

New Projects. Host plant resistance for soybean aphid, Erin Hodgson; Oat breeding, Mark Newell; Alternative grasses; Steve Barnhart; Crop residue and K release, Antonio Mallarino; Date of rolling soybeans, NIRF; Pre-planting rolling of corn and soybeans, NIRF.

Crop Season Comments

Corn planting, started on April 19 and was completed on May 4. Harvest began October 4 and was completed October 12 with average yields of 170–180 bushels/acre and lower grain moisture than typical.

Soybean planting started April 28 and was completed May 6. Harvest ran from September 28 through October 11 with average yields of 50–60 bushels/acre.

Weather Comments

Winter 2009–2010. At the start of 2010 the ground water level was close to 4-ft tile depth due to the wet 2009 fall. March's above normal temperatures allowed the thawing of the ground by March 18. The ground water level stayed above the 4-ft level until May 26.

Spring. On May 9 the last hard spring frost came when the temperature fell to 29°F reducing corn stands. Strong winds and hail on June 18 damaged the young crops. Numerous June rains made June the third wettest on record and saturated the soil. A 3.4 in. rain during the night of June 22 brought Otter Creek out of its banks and put between one fourth to one third of the farm under water.

Summer. July was the second wettest on record. Above normal July and August temperatures hastened crop development. Wet weather was favorable for corn leaf diseases.

Fall. Most corn matured before the first killing frost on October 3 when the temperature reached 29°F. Dry October weather facilitated field drying of corn and fieldwork. Fieldwork ended on November 11.

Acknowledgements

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Table 1. Northern Research and Demonstration Farm, Kanawha, IA, monthly rainfall and average temperatures for 2010.

Month	2010	Rainfall (in.)	Temperature (°F)		Days 90° or above
		Deviation from normal	2010	Deviation from normal	
March	1.19	-.80	36.6	2.1	0
April	5.20	1.96	54.7	6.6	0
May	2.43	-1.40	61.1	1.0	2
June	10.75	5.94	69.4	0.0	1
July	8.54	4.59	73.7	0.9	2
August	1.54	-2.46	74.2	3.7	5
September	3.36	0.16	61.7	-0.7	1
October	<u>.39</u>	<u>-1.81</u>	53.6	3.2	<u>1</u>
Totals	31.41	6.18			12

Information on Experiments in Previous Annual Progress Reports

	Year
Use of Ground Eggshells as a Liming Source RFR-A9113	09
Phosphorus Fertilization Strategies for Alfalfa Hay Production followed by Corn	
Harvested for Grain RFR-A9108.....	09
Long-term Tillage and Crop Rotation Effects on Yield and Soil Carbon RFR-A9110.....	09
Soybean Rust Reaches Iowa RFR-A9028	09
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

Research Farm Projects

Research Projects

Alternative grass variety trial
 Biological control of soy aphids
 Crop residue and K release
 Crop rotation and N rates
 Date of rolling of soybean
 Demonstration shrub row
 Different genetic sources of SCN resistance
 Fusarium root rot × SCN on soybean
 Home demonstration garden
 Host plant resistance for aphids
 Long-term tillage and crop rotation
 Long-term K fertilizer for corn and soybean
 Long-term P fertilizer for corn and soybean
 Oat breeding
 P fertilizer for corn-alfalfa rotation
 Pelletized manure
 Phytophthora soy micro plots
 Placement methods for K for corn and soybean
 Placement methods for P for corn and soybean
 Populus breeding
 Pre-plant rolling of corn and soybean
 Seasonal and rotational influence on corn N requirements
 Soybean disease resistance breeding
 Soybean SDS breeding
 Specialty soybean test
 Tree biomass production
 UAN with Instinct fertilizer for corn
 USA national phenology network
 Use of ground eggshells as a liming source
 Weed identification garden

Project Leader

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