

2010

Northwest and Allee Farms Summary

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Northwest and Allee Farms Summary

Abstract

Includes:

Northwest Research Farm Summary

Allee Demonstration Farm Summary

Keywords

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Northwest and Allee Farms Summary

RFR-A9069

Northwest Iowa Experimental Association

2009–2010
Executive Board

President.....	Jim Hultgren, Buena Vista County
Vice President.....	William Foell, Sac County
Secretary.....	Joel DeJong, ISU Field Agronomist
Treasurer.....	Bruce Amundson, Cherokee County
Executive Committee.....	Craig Struve, O'Brien County
Executive Committee.....	Don Belson, Ida County
Executive Committee.....	Jerry Crew, Clay County

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Buena Vista.....	Brian Waldstein, Jim Hultgren
Cherokee.....	Bruce Amundson, Tom Bindner
Clay.....	Jerry Crew, Roger Nelson
Ida.....	Don Belson, Vacant
Lyon.....	Rodney Mogler, Bob Ladd
O'Brien.....	Craig Struve, Chad Schwartz
Osceola.....	Dave Rossman, Brian Kemp
Plymouth.....	Jeff Jonas, Luke Homan
Sac.....	William Foell, Vacant
Sioux.....	Marvin Van't Hul, Mike Schouten

Research and Demonstration Farms

Superintendent, Northwest.....	Ryan Rusk
Ag Specialist.....	Josh Sievers
Superintendent, Allee.....	Lyle Rossiter
Manager, Research Farms.....	Dennis Shannon 32 Curtiss
Coordinator, Research Farms.....	Mark Honeyman 32 Curtiss

Iowa State University
Ames, IA 50011

Northwest Research Farm Summary

Ryan Rusk, farm superintendent

Farm Comments

Developments. A total of 40 research studies were conducted at the research farm this growing season. Fourteen of those trials were initiated for the first time in 2009. The on-farm research project continues to be a great success in northwest Iowa, with a total of 38 projects this season. You can find results from those trials at <http://ofr.ag.iastate.edu>. The conference room at the research farm is available for meetings, and farm tours are always available to those interested. Please give us a call at 712-446-2526 to set up an appointment or just stop by the farm.

Field days and tours. There were eight events held by the Northwest Farms, Sutherland and Doon. A total of 1,468 people attended field days and other programs.

New projects. Fertility timing in corn and soybeans, Palle Pedersen; Impact of liming source on soil pH, Antonio Mallarino; Miscanthus establishment evaluation, Emily Heaton; Regional sorghum evaluation for biofuels, Ken Moore; Smartstax trait evaluation in corn, Aaron Gassman; Struvite as a phosphorus source, Antonio Mallarino; Twin row × plant population, Roger Elmore; Corn aphid management, Corn plant population, Impact of spring tillage methods on corn yield, Planter closing wheel comparison in corn, Rolling soybeans × timing, Soybean herbicide performance comparison, and Sugar application effect on soybean yield, Northwest Research Farm (NWRF) staff.

Crop Season Comments

Corn planting began March 30 and was completed May 11. Harvest began October 17 and was completed November 21. Corn yields following soybeans averaged 216 bushels/acre and continuous corn yielded 191 bushels/acre.

Soybean planting started April 24 and was completed May 20. Harvest began September 28 and was completed October 19 with average yields of 61 bushels/acre.

Weather Comments

Spring 2009. High rainfall in September and October of 2008 brought us into the 2009 growing season with a full soil moisture profile. Below average rainfall in April and May allowed for timely field operations and planting. Many farmers noted that planting conditions were ideal, which led to good crop emergence, uniform stands, and good root development. Fairly cool temperatures in April, May, and June slowed crop development and dry conditions made weed control with herbicides more difficult.

Summer 2009. Crop growth and development continued to lag as temperatures that were well below normal dominated the months of July and August (7.3 and 6.3 degrees below normal, respectively). Low rainfall continued all growing season with 7.07 in. below normal from April through September. Cool temperatures and the timeliness of the rains helped alleviate crop stress during this period. Soybean aphids were again a major pest for soybean producers in the area and most of the fields were treated.

Environmental conditions also increased the incidence of eyespot in many cornfields this year and several fields were treated with fungicide to combat this disease. Some tipping

back of corn ears was noted due to the cool conditions and the prevalence of foliar diseases, which reduced the photosynthetic capacity of the plants.

Fall 2009. The month of October is a month that many of us want to forget, as the weather not only turned cold, but extremely wet. We received over 7 in. of rain (18 days with precipitation) during the month, which halted the soybean harvest. Many soybeans were harvested at high moisture level because continual cool and wet conditions did not allow them to dry in the field. Corn harvest moistures also were extremely high due to the lack of heat throughout the growing season. We did receive our “Indian Summer” in November, which allowed the corn to dry better than expected in the field. Most corn was harvested in the 18–24% moisture range. Soybean yields were a bit disappointing due to the dry conditions in August, but corn yields in the area were once again well above average.

Acknowledgements

We would like to thank everyone who attended field days this past year at the research farm. We hope that the information presented was valuable to your operation. We also would like to thank the Northwest Iowa Experimental Association and ISU Extension for their support throughout the year. We also would like to recognize the following businesses for their donations to the Northwest Research Farm: Monsanto, BASF, Syngenta Crop Protection, Rosen’s Inc., Pioneer Hi-bred International, C-S Agrow Service, Producers Coop, Ag Partners, and Security State Bank

Thanks again for all your support and we look forward to an exciting and rewarding 2010 growing season.

Table 1. Northwest Research and Demonstration Farm, Sutherland, monthly rainfall and average temperatures for 2009.

Month	Rainfall (in.)		Temperature (°F)		Days 90° or above
	2009	Deviation from normal*	2009	Deviation from normal	
April	1.89	-0.71	44.3	-1.8	0
May	1.81	-2.04	58.4	-0.7	1
June	2.94	-1.52	65.9	-2.9	1
July	4.34	0.88	65.8	-7.3	0
August	2.33	-1.69	65.8	-6.3	0
September	1.32	-1.99	62.5	1.4	0
October	<u>7.12</u>	<u>5.07</u>	41.5	-7.3	<u>0</u>
Totals	21.75	-2.00			2

*Rainfall averages recalculated based on data from 1957–2008.

Projects at Sutherland

Research Project

Biological control of soybean aphids
 Biomass cropping systems
 Corn aphid management
 Corn breeding
 Corn hybrid by cropping system
 Corn fungicide efficacy x timing
 Corn genetics x insecticide
 Corn planting date
 Corn plant population
 Eggshells for liming experiment
 Fertility timing in corn and soybeans
 Impact of liming source on soil pH
 Impact of spring tillage methods on corn yield
 Long-term nitrogen study
 Long-term rotation study
 Long-term tillage and carbon sequestration
 Miscanthus establishment evaluation
 Planter closing wheel comparison in corn
 Regional sorghum evaluation for biofuels
 Rolling soybeans x timing (no-till and tillage)
 Smartstax trait evaluation in corn
 Soybean aphid threshold experiment
 Soybean fungicide x insecticide interaction
 Soybean herbicide performance comparison
 Soybean planting date
 Soybean row width x tillage
 Soybean rust sentinel plots
 Soybean varietal response to fungicide
 Struvite as a phosphorus source
 Sugar application effect on soybean yields
 Surface runoff study
 Tillage x fertilizer placement study
 Tillage x rate of lime study
 Tree biomass study
 Twin row x corn plant population
 Asparagus variety trial
 Corn burner as primary shop heat
 Demonstration garden, Rock Rapids and Sutherland
 Demonstration windbreak
 Strawberry variety trial
 Water table monitoring
 Weather station

Project Leader

M. O'Neal
 K. Moore
 NWRF Staff
 K. Lamkey
 R. Elmore
 A. Robertson
 NWRF Staff
 R. Elmore
 NWRF Staff
 P. Kassel
 P. Pedersen
 A. Mallarino
 NWRF Staff
 J. Sawyer
 P. Pedersen
 M. Al-Kaisi
 E. Heaton
 NWRF Staff
 K. Moore
 NWRF Staff
 A. Gassman
 M. O'Neal
 A. Robertson/M. O'Neal
 NWRF Staff
 P. Pedersen
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 X. B. Yang
 P. Kassel
 A. Mallarino
 NWRF Staff
 A. Mallarino/M. Helmers
 A. Mallarino
 NWRF Staff
 J. Randall/R. Hall
 R. Elmore
 NWRF Staff
 NWRF Staff
 C. Haynes
 J. Randall
 C. Haynes
 Natural Resources Conversation Svc.
 NWRF Staff

Allee Demonstration Farm Summary

Lyle Rossiter, farm superintendent

Farm Comments

Developments. The implementation on-farm research (OFR) continues in Buena Vista, Sac, Pocahontas, parts of Carroll, Calhoun, Ida, Cherokee, and Clay counties. OFR assisted individual farmers to set up field-length research and gain data for statistical analysis. Extension crop specialists Paul Kassel, Mark Licht, and Allee Farm superintendent Lyle Rossiter assisted seven farmers with 22 field projects.

Field days and tours. The Allee Farm hosted the Ag-Citing Days for three hundred third graders from all of Buena Vista County School Districts. Extension staff and Ag Businesses conducted the education event with talks on wind energy, corn and soybean food production, gardening, and communication in the family. The 4-H youth brought their goats, baby calves, rabbits, chickens, and baby pigs to the Allee Farm and talked about their projects for the fair, daily chores, and animal care experiences.

A delegation of government officials from Nigeria visited for three days at the Allee Farm. ISU Extension staff exchanged information on global food production and how U.S. agriculture food production works, from the farm fields and animal production to the consumer's dinner plate. The delegation enjoyed the hands-on experiences of feeding sows with their baby pigs, mixing feed rations, feeding cattle with a tractor, driving a skid loader, and operating manure management systems to fertilize crops.

A corn maze in the shape of the Statue of Liberty and Betsy Ross' U.S. flag amazed six hundred visitors. The Iowa Corn Promotion Board used the corn maze to educate 4-H

clubs and school students in the uses of corn in their daily lives while the kids walked through the maze. Non-perishable food items were the cost of admission on Sundays. The Newell-Fonda School National Honor Society Students delivered over 300 pounds of food and \$56 in cash donations to the local food pantries.

The Buena Vista special swine class included 36 participants who gained swine production knowledge, herdsmanship, and showmanship techniques at the Allee Farm. With the experience, each participant purchased, showed, and marketed four market pigs at the county fair in July for a total of 156 pigs. The Allee Farm continues to work with the School-to-Work program with the Newell-Fonda Community School District, providing agriculture education from the classroom to practical experiences related to crop, swine, beef, and machinery operations. The local 4-H clubs use the farm for monthly meetings and maintain the Newell Booster 4-H Club apple orchard. Apple and pie sales totaled \$840 for the club.

The Allee Farm appreciates the community support and the opportunity to be an educational site for all ages and families. A total of 1,204 guests visited the farm in 2009.

New projects. Soil grid mapping, yield monitoring, and Guidance Position Systems (GPS) have been integrated into the cropping systems for demonstration and research. The Allee Farm continues to feed and collect research data for bulls, steers, and heifers from the purebred Angus cowherd at the ISU McNay Research Farm, Chariton, IA.

Livestock. Custom finishing of 49 heifers, 149 steers, and 95 bulls was completed this year. Five bulls were placed back into the

breeding herd at the McNay Research Farm. The farm sold 133 antibiotic-free market swine to Niman Ranch. The swine breeding herd was sold in August. Feeder pigs will be purchased in the future and be marketed antibiotic-free to Niman Ranch.

Crop Season Comments

Corn planting started April 28 and was completed May 27. Harvest began November 11 and was completed November 17 with average yields of 183 bushels/acre.

Soybean planting started June 7 and was completed June 8. Many rain showers in May through June provided a small window of optimal planting days. Harvest began October 29 and was completed October 30 with average yields of 53 bushels/acre.

Weather Comments

Winter. January provided record low temperatures the third week (-35 wc. for four days) and 9.5 in. of snow. February had two days of sub-zero temperatures with 8 in. of snow, and 4 days of foggy/rainy conditions.

Spring. March was damp with 10 days of fog and 7 in. of snow. The ground was frozen through March. The high temperature was 57°F on March 28. April was warmer than normal with 2.5 in. of rain, which allowed planting to start the third and fourth week.

May was cool and many rain days delayed corn and soybean planting. Fifteen days of moisture and a total of 12.6 in. of rain occurred in May.

Summer. The first part of June was cool with many nights below 55°F and the high temperature was 88°F. Late planting of corn and soybeans was finished the last two weeks of June. The cool temperatures from July 1–14 slowed plant development. August had warmer days and cool nights with no rain for the first two weeks. Lawns started to brown the last part of August.

Fall. September rains totaled 4.2 in. Warmer weather aided crop development but the lack of growing degree units slowed soybean development and limited dry-down of corn. October was wet and cool with a limited number of harvest days. All corn needed to be artificially dried this year. Harvest and fall tillage continued into December.

Acknowledgements

The farm would like to thank the Practical Farmers of Iowa, the Newell-Fonda School-to-Work program, the On-farm Research staff, the Newell Cooperative, ISU Extension, and the Iowa Corn Growers Association for their assistance with field days and events.