

Western Research Farm Summary

RFR-A20134

**Western Iowa Experimental Farm Association
Founded 1946**

Officers

Chairperson.....	James Else, Mapleton
Vice Chairperson	Linda Herman, Pisgah
Secretary-Treasurer.....	Richard Pope, Sloan

Directors

Crawford County	Aaron Gress
Crawford County	Kyle Bohnker
Harrison County.....	Linda Herman
Harrison County.....	Carter Oliver
Monona County	Keith Zediker
Monona County	James Else
Woodbury County.....	Jason Yockey
Woodbury County.....	Richard Pope
At large.....	Don Lord

Western Research Farm

Superintendent	Chris Beedle
Agricultural Specialist	Craig Riesberg

Associate Dean for Operations	Mark Honeyman
Farms Manager	Tim Goode

103 Curtiss Hall
513 Farm House Lane, ISU

Farm and Weather Summary

Chris Beedle, farm superintendent

Farm Comments

Developments. Equipment changes during 2020 included a Hagie 284 sprayer. The cover crop interseeder was fully activated. No other equipment upgrades at this time.

Numerous general farm maintenance activities occurred. Repurposing of the old headquarters building to a poultry building for the youth broiler project with Monona County Extension, plus repairs to the swine facilities for the youth project pigs, were completed.

Summer interns. No summer interns were employed in 2020.

Labor. Dale Melby, Soldier, Iowa, helps during the summer and peak labor times in the spring and fall.

Harry Riesberg, Castana, Iowa, continues year-round assistance and performs many tasks vital to the operation of the farm.

Craig Riesberg, agricultural specialist, Soldier, Iowa, is becoming a vital component to the daily activities and planning occurring at the farm. Along with his duties at the farm, Craig has responsibilities with the Monona County Extension in the demonstration garden, swine and poultry youth projects, county fair week, and other tasks as needed.

A special thanks to Craig, Harry, and Dale.

Field days and tours. Eleven events were held during the year, with a total of 692 people visiting the farm or attending a meeting. The annual meeting and crop update meeting were held in late February. The Monona County Extension special swine and poultry project for youth was cancelled due to COVID-19. The demonstration garden field day at the Monona County fairgrounds also was cancelled due to COVID-19. The presence of COVID-19 greatly hindered the ability to reach the community.

New projects. There were no cattle projects this year at the farm. The seaweed inclusion trial was completed, as well as two rounds of hazelnut inclusion for the alternative swine project. One new pig project was started in the spring. The new project is a phase feeding comparison, 5-phase vs. 8-phase. In the realm of cover crops and with the construction of the interseeder, we planted three small plot research plots as well as four on-farm trials. Other project developments included completing eight on-farm cooperator trials.

Livestock. Livestock production in 2020 included a group of 63 steers pastured during the summer and then shipped to the ISU Allee Farm, Newell, Iowa, for feeding. These steers were part of the ISU McNay Research Farm, Chariton, Iowa, beef cattle breeding project.

Swine production consisted of finishing approximately 1,100 head of market pigs spanning two projects. The pigs were weighed every 28 days. Following final weigh day, data was collected at the processing plant. The pigs were marketed for a niche pork market.

Crop Season Comments

Corn planting started May 8 and was completed May 21. Corn harvest started October 24 and was completed October 28, with an average yield of 217 bushels/acre. Soybean was planted between May 3 and May 24. Soybean harvest started October 17 and was completed October 23, with an average yield of 51 bushels/acre. The corn and soybean yields were 8 percent above and 8 percent below, respectively, the 5-yr farm averages. Alfalfa yields averaged six tons/acre with three cuttings harvested and were 1 ton/acre above the 5-yr farm average.

The year began with a warm and wet January in western Iowa. February was closer to normal temperatures and below average moisture. March brought above normal temperatures and rainfall while April cooled and began to dry for planting. May was cool and dryer than normal (Table 1).

Planting followed a normal trend in this part of the state. June through September were drier than the 30-yr average with 6.5 in. less rain and above normal temperatures. Questions about adequate moisture for the 2021 crop year are being asked. Much of the rest of the state was drier than normal for the entire growing season and into the fall harvest. Western Iowa had timely planting with adequate rains and a seasonal harvest. Much of the rest of the state and region was not as fortunate with drought conditions as well as a derecho that damaged many acres across Iowa and the Midwest. Overall, a good growing season in western Iowa.

Acknowledgements

Thanks to all members, sustaining members, and donors who support the Western Research and Demonstration Farm through donations of time, money, and products. Their support has made many of this year's trials possible.

Sustaining Members

Community Bank, Dunlap
First State Bank, Mapleton
Sloan State Bank, Sloan and Whiting
Iowa-Nebraska State Bank, South Sioux City
Valley Bank, Mapleton and Danbury
Western Iowa Power Cooperative
Soil and Water Conservation Districts of:
Crawford County
Harrison County
Monona County
Woodbury County

Research Farm Projects

<u>Project</u>	<u>Project Leader</u>
An interseeder for cover crops	M. Witt/C. Beedle
Carbonate nodules in loess soils	J. Beeck/E. Swanner/M. Rasmussen
Evaluating a seaweed additive for young pigs	P. Lammers/C. Beedle
Evaluating hazelnuts for niche pork	P. Lammers/C. Beedle
Feeding pigs for niche pork market	P. Lammers/C. Beedle/M. Honeyman
Grazing cover crops with beef cattle	D. Loy/E. Lundy
Interseeding cover crops	M. Witt/M. Licht
Monarch project/milkweed demonstration	R. Hellmich
Youth swine project	D. Stender/M. Beerman/C. Beedle
Youth poultry (broiler) project	M. Beerman/C. Beedle
Iowa MesoNet weather station	
<i>(real time data online)</i>	
Air temperature	
Relative humidity	
Precipitation	
Wind: speed and direction	
Solar radiation	
Soil temperature	
Soil moisture	
Demonstrations:	
Manure settlement basin	
Composting livestock mortalities	
Composting hoop buildings manure pack	
Swine finishing in hoop buildings	
Demonstration Garden	
On-Farm Cooperator Trials:	
<i>(see articles elsewhere in this report for details)</i>	
Corn and soybean population by planting date	
Soybean date of planting	
Cover crop demonstrations in corn and soybean	
Ammonium sulfate fertilization of soybeans	

Table 1. Monthly precipitation, average temperature, and departure from normal for 2020.

	<u>Precipitation</u>		<u>Temperature</u>		<u>Days 90°F or above</u>	<u>Nights 32°F or below</u>
	<u>Total</u>	<u>Departure*</u>	<u>Mean</u>	<u>Departure*</u>		
January	1.11	+0.48	23.1	+1.9		31
February	0.24	-0.74	27.2	+2.3		29
March	3.26	+1.49	40.5	+3.6		17
April	1.22	-2.10	48.3	-1.1		12
May	2.69	-1.97	58.1	+3.6		1
June	2.59	-2.32	75.9	+5.6	10	
July	3.96	-0.21	76.1	+2.1	1	
August	1.19	-3.04	73.3	+1.3	6	
September	2.20	-0.93	63.7	-1.0	2	
October	2.62	+0.28	46.9	-5.3		14
November	1.49	+0.09	42.8	+5.7		19
December	0.41	-0.66	28.3	+0.7		30
Total	22.98	-9.63	n/a	n/a	19	153

*Departure from 30-yr average as recorded at the ISU Western Research Farm weather station.

Table 2. Monthly growing degree day units (GDD base 50) for the 2020 growing season April 1 to September 30.

	<u>GDD monthly</u>		<u>GDD accumulation</u>	
	<u>Total</u>	<u>Departure*</u>	<u>Total</u>	<u>Departure*</u>
April	202	+79	202	+79
May	307	-53	509	+26
June	732	+118	1,241	+144
July	791	+50	2,032	+194
August	698	+15	2,730	+209
September	427	-19	3,157	+190

*Departure from 30-yr average as recorded at the ISU Western Research Farm weather station.