

Western Research Farm Summary

RFR-A1969

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	Rich Pope
At large	Open

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 2019 included building an interseeder with Dawn Equipment row units and a Gandy air seeder, use of a roller mill for rolling hazelnuts, and a used 1997 Chevy 1500 pickup truck for use on the farm.

Numerous general farm maintenance activities occurred. Repairs to the large pig hoops and removal and replacement of pasture fence continues.

Summer interns. Caleb Clemon, Soldier, Iowa, returned as a summer intern at the farm. This is Caleb's third summer at the farm. Caleb is attending Iowa State University pursuing a B.S. in agricultural business. He helped with the day-to-day activities at the farm, including gathering data in several projects.

Caylie Boyle, Moorhead, Iowa, was a summer intern at the farm. Caylie is attending Iowa State University pursuing a B.S. in animal science. She helped with the day-to-day activities at the farm, including gathering data in several projects.

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 joined the staff November 2019 as a full-time ag specialist.

A special thanks to Caleb, Caylie, Craig, Harry, and Dale.

Field days and tours. Four 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 project for youth was held in June. Cynthia Haynes led a field day in August for the demonstration garden at the Monona County fairgrounds. A tour of the research farm was held in October with staff from Morningside College for their introduction to agriculture course.

New projects. The cover crop grazing study that started in spring 2017, was modified to include fall grazing in 2018. No grazing was available in the spring and calves grazed for seven days in the fall. We wrapped up the 4-phase feeding and 8-phase feeding comparison. Two new pig projects were started in the spring. The first project was in cooperation with the University of Wisconsin, Platteville, examining the inclusion of milled, whole cull hazelnuts in the finishing diet. The second project was the inclusion of a seaweed product throughout all phases of feeding. Other project developments included completing 20 On-Farm cooperator trials.

Livestock. Livestock production in 2019 included a group of 43 steers in the cover crop grazing study pastured during the summer and then shipped to the ISU Allee Farm, Newell, Iowa, for finishing. 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 spanning three projects. The pigs were weighed every 28 days. Following final weigh day, data were collected at the processing plant. The pigs were marketed for a niche pork market.

Crop Season Comments

Corn planting started May 14 and was completed May 16. Corn harvest started November 14 and was completed November 17, with an average yield of 213 bushels/acre. Soybeans were planted between May 3 and May 20. Soybean harvest started October 24 and was completed October 26, with an average yield of 55 bushels/acre. The corn and soybean yields were 6.6 percent above and 2.8 percent below, respectively, the 5-yr farm averages. Alfalfa yields averaged 3.33 tons/acre with three cuttings harvested, and were 1.42 ton/acre below the 5-yr farm average. This included six acres of new seeding with only one cutting.

The year began with a warm and dry January in western Iowa. January cooled and led to the seventh wettest and 16th coolest February on record. March continued this trend of cool and wet and transitioned to a warmer and dry April allowing planting to begin. May was warm and wetter than normal (Table 1).

Counter to the rest of the state and most of the country, planting followed a normal trend in this part of the state. June through August were drier than the 30-yr average with 6.59 in. of rain, and near normal temperatures. Most of the rest of the state was unseasonably wet for the entire growing season and into the fall harvest. Contrary to the rest of the state, western Iowa had timely planting allowing ample time for the crop to mature, and a timely harvest. Much of the rest of the state and country was not as lucky. 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, S. 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>
Effects of dietary protein on intramuscular fat of finishing pigs in bedded hoop barns	M. Honeyman/D. Stender
Monarch project/milkweed demonstration	R. Hellmich
Grazing cover crops with beef cattle	D. Loy/E. Lundy
Feeding pigs for niche pork market	M. Honeyman/P. Lammers/ 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	
On-Farm Cooperator Trials:	
<i>(see articles elsewhere in this report for details)</i>	
Corn population	
Soybean population	

Table 1. Monthly precipitation, average temperature, and departure from normal for 2019.

	<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	0.05	-0.60	21.2	0.0		29
February	2.33	+1.64	14.8	-10.4		28
March	3.73	+2.03	29.2	-8.0		26
April	2.03	-1.33	50.3	+0.9		8
May	5.76	+1.14	57.5	+3.1	1	
June	1.61	-3.41	71.1	+0.8	6	
July	3.01	-1.20	74.7	+0.7	2	
August	2.32	-1.98	70.9	-1.1	1	
September	6.22	+3.20	69.7	+5.2	0	
October	3.24	+0.93	46.4	-6.0		12
November	2.24	+0.87	34.2	-3.0		24
December	1.65	+0.60	29.3	+1.8		30
Total	34.19	+1.89	n/a	n/a	10	157

*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 2019 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	191	+70	191	+70
May	302	-60	493	+10
June	613	-1	1,106	+9
July	750	+9	1,856	+18
August	644	-40	2,500	-22
September	589	+148	3,089	+126

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