

Muscatine Island Research Farm Summary

RFR-A1707

Muscatine Island Research Farm Association

President..... Ron Shepard, Fruitland
 Vice President Rick Bartenhagen, Muscatine
 Secretary-Treasurer..... Vince Lawson, Fruitland
 Director Keith Bartenhagen, Muscatine
 Director Greg Wilson, Muscatine

Research Farm Superintendent Myron Rees

Ag Specialist Josh Michel
 Ag Specialist Dominic Snyder

Associate Dean for Operations Mark Honeyman
 Research and Demonstration Farms Manager Tim Goode
 103 Curtiss Hall
 513 Farm House Lane, ISU

2017 Acknowledgements

The following companies have provided products or financial support during 2017.
 Their cooperation and support is greatly appreciated.

- Cash-N-Carry Chemicals LLC, 220 N 7th Avenue, Washington, IA 52353
- Crop Production Services, P.O. Box 209, Atalissa, IA 52720
- DuPont Pioneer, P.O. Box 1000, Johnston, IA 50131
- Hooks Point Irrigation, 3850 Xavier Avenue, Stratford, IA 50249
- Muscatine Island Cooperative, 2420 57th Street, Muscatine, IA 52761
- Muscatine Ag, 3094 170th Street, Muscatine, IA 52761
- Syngenta Seeds, Inc., P.O. Box 959, Minneapolis, MN 55440

Farm and Weather Summary

Josh Michel, agricultural specialist

Farm Comments

After Vince Lawson retired in January, two new staff members were hired as agricultural specialists — Josh Michel and Dominic Snyder. Josh joined the farm in January and specializes in row crop production and research. Dominic joined the farm in May and specializes in horticultural crop production and research.

This year presented a few challenges for the new farm staff members. A severe storm on May 7 damaged the center pivot at the Ossian field. Just prior to planting, the farm's primary tractor needed engine repairs. A Japanese beetle infestation was especially troublesome this year.

This year also brought some improvements to the farm. New gutters and fascia were installed on the shop and office building. A new Gandy fertilizer spreader was purchased. Parts from the damaged pivot are being salvaged to install another pivot southwest of the headquarters.

Field days and tours. The Home Demonstration Garden Tour was held July 20 featuring a garden established by Master Gardeners for donating fresh produce to local food banks. New flower and vegetable varieties also were showcased. The annual farm field day was held August 15. Several corn and soybean trials and demonstration plots were exhibited. Excellent attendance was observed on both days.

New projects. Corn nitrogen trial, J. Michel; Muskmelon cultivar trial, D. Snyder; Yield forecasting–FACTS, S. Archontoulis; Corn drought stress study, J. Shriver; Soybean root study, B. Scott and K. Falk.

Crop Season Comments

Vine crops were planted later than normal in mid-June, with an intended harvest period of late August and early September. Warm temperatures in June and July helped the crop mature. Cool weather in August and September allowed for a prolonged harvest period through October. The resulting harvest turned out well, with better than expected yields. The staff established new market connections for melons following the death of long-time wholesaler Darwin Paulsen. A good pumpkin crop was harvested by late October and donated to a local group. Pest control of Japanese beetles was difficult as they attacked many horticultural crops, flowers, and even row crops.

By the end of April, most of the corn acres were planted. Soybeans were planted by mid-May. Cool May temperatures slowed the crops some, but warm weather in June quickly got crops back on track. Lack of rainfall in August put stress on the non-irrigated soybeans. The warm temperatures in September and October allowed normal maturity and good dry down. Corn tested 15 percent moisture October 19. Corn and soybean harvest occurred mid-October with an average yield of 215 and 41 bushels/acre, respectively.

Weather Comments

Monthly average rainfall and temperature for the 2017 growing season are shown in Table 1. Overall, the season was warmer than normal, and at times, wetter than normal. July in particular was notable for rainfall of 8.09 inches. Unfortunately, the rainfall did not carry into August when the farm received 1.18 inches of rain. The most significant weather event during 2017 was a violent storm causing property damage on May 7, resulting in a wrecked pivot and tree damage. Monthly average temperatures in September and

October were approximately 4 degrees warmer than normal. Rainfall also was above normal in September and October.

The growing season, as measured by days with temperatures above freezing, was 210 days in 2017. The last freezing temperature (30°F) in the spring was recorded April 1 and the first freezing temperature (30°F) in the fall was recorded October 28.

Acknowledgements

The staff from the ISU Southeast Research Farm, Crawfordsville, helped on several occasions. Board members from the Muscatine Island Research Farm Association also provided support and guidance. Their support was much appreciated and proved essential in the gathering of information necessary to achieve the results reported in this publication.

Table 1. Muscatine Island Research and Demonstration Farm, Fruitland, monthly rainfall and average temperatures for 2017.

Month	Rainfall (in.)		Temperature (°F)		
	2017	Deviation from normal	2017	Deviation from normal	Days 90° or above
March	2.48	-0.22	40.4	1.0	0
April	4.82	1.12	54.5	3.7	0
May	4.25	-0.15	61.5	-1.1	1
June	3.00	-1.60	73.8	2.1	10
July	8.09	4.19	75.6	0.3	10
August	1.18	-2.92	69.8	-3.3	0
September	4.14	0.64	67.7	3.4	7
October	<u>4.53</u>	<u>1.73</u>	56.9	4.4	<u>0</u>
Totals	32.49	2.79			28

2017 Research Farm Projects

Project

Home demonstration garden
 Milkweed demonstration planting
 Effects of biochar on potato and sweet corn
 Evaluation of SCN-resistant soybean varieties
 Yield forecasting–FACTS
 Corn nitrogen trial
 Corn drought stress
 Soybean variety screening for SDS resistance
 Soybean seed treatment evaluations
 Soybean breeding project–SDS and Charcoal Rot
 Soybean root study
 Cover crop effects on SCN populations
 Corn variety trial
 Muskmelon cultivar trial

Project Leader

C. Haynes
 R. Hellmich
 A. Nair
 G. Tylka/C. Marett/G. Gebhart
 S. Archontoulis
 J. Michel
 J. Shriver
 S. Cianzo/G. Gebhart
 D. Mueller/S. Wiggs
 A. Singh/B. Scott
 B. Scott/ K. Falk
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 D. Snyder