

Muscatine Island Research Farm Summary

RFR-A1601

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 Vince Lawson

Ag SpecialistBrandyn Chapman (resigned July 2016)

Research and Demonstration Farms Coordinator Mark Honeyman
 103 Curtiss Hall, ISU

Research and Demonstration Farms Manager Tim Goode
 103 Curtiss Hall, ISU

2016 Acknowledgements

The following companies have provided products or financial support during 2016.
 Their cooperation and support is greatly appreciated.

Agrium Advanced Technologies, 2915 Rocky Mountain Avenue, Loveland, CO 80538
 Dow AgroSciences, 9330 Zionsville Road, Indianapolis, IN 46268
 DuPont Pioneer, P.O. Box 1000, Johnston, IA 50131
 E.I. du Pont de Nemours and Company, 1007 Market Street, Wilmington, DE 19898
 FMC Corporation, Agricultural Products Group, 1735 Market Street, Philadelphia, PA 19103
 Hooks Point Irrigation, 3850 Xavier Avenue, Stratford, IA 50249
 Koch Agronomic Services, 4111 E 37th Street North, Wichita, KS 67220
 Muscatine Island Cooperative, 2420 57th Street, Muscatine, IA 52761
 Syngenta Crop Protection, P.O. Box 18300, Greensboro, NC 27419
 Syngenta Seeds, Inc., P.O. Box 959, Minneapolis, MN, 55440

Farm and Weather Summary

Vince Lawson, farm superintendent

Farm Comments

The year 2016 will be my 35th and final season as farm superintendent. I'm very grateful for the opportunity to serve in this capacity and to be a part of Iowa agriculture. During my tenure, I have organized or assisted in conducting over 400 field research projects, mentored 86 summer students, oversaw farm expansion from 40 to 120 acres, and diversified operations from strictly fruit and vegetables to include row crops of corn and soybeans. What a journey!

This year was not without its challenges. A severe storm on June 22 delivered strong winds, destructive hail, and 4.7 in. of rainfall that damaged buildings, dislodged trees, wrecked a center pivot in the Ossian field, and inflicted significant crop and trial damage.

Field days and tours. The annual meeting of the Muscatine Island Research Farm Association was held June 21, 2016 at the research farm in Fruitland. A wagon tour of the farm was followed by a catered meal and the association business meeting. The Home Demonstration Garden Tour was held August 9 and featured a garden established by Master Gardeners for donating fresh produce to local food banks. New flower and vegetable varieties also were showcased.

New projects. Sweet corn herbicide evaluation, Vince Lawson; Corn nitrogen stabilizer use on sandy soil, Vince Lawson; Corn variety trial, Jim Rouse, Iowa Crop Improvement Association; Cover crop effects on SCN populations, Greg Tylka and Chelsea Harback; SDS effects on seed quality, Joshua Knight and Susana Goggi.

Crop Season Comments

It would have been a good crop year but for the severe storm that occurred June 22. An excellent looking melon crop, about 10 days from harvest, was totally destroyed in a matter of minutes. In an attempt to salvage something, we pulled mangled plants off the plastic mulch and replanted a portion of the crop. Normally, we wouldn't expect melons transplanted on July 15 to produce much but the unusually warm temperatures during late summer and fall helped mature a surprisingly good melon crop by mid-September. A good pumpkin crop also was harvested by early October.

Field corn, about one week from tasseling, had leaves shredded and stalks broken by the June 22 storm. A crop hail adjuster determined 30 percent damage, which was probably pretty close as the corn crop averaged 162 bushels/acre at harvest. The warm temperatures and dry conditions during September and October helped dry the grain, which tested 15 percent moisture on October 17. Soybeans also were damaged by the June 22 hail storm but probably recovered the best of all crops and produced an average yield of 56 bushels/acre.

Weather Comments

Monthly average rainfall and temperature for the 2016 growing season are shown in Table 1. Overall, the season was warmer than normal, and at times, wetter than normal. June, July, and August, in particular, were notable for rainfall of 6.6, 6.1, and 8.1 in., respectively. The most significant weather event during 2016 was a violent storm causing damage to crops and property in the early morning of June 22. It delivered 65 mph winds, damaging hail, and 4.7 in. rainfall. The months of September and October were unusually warm with average monthly

temperatures 5.7 and 6.2 degrees above normal, respectively. Rainfall, however, was below normal during September and October.

The growing season, as measured by days with temperatures above freezing, was 182 days long in 2016. The last freezing temperature (30°F) in the spring was recorded April 13 and the first freezing temperature (30°F) in the fall was recorded October 13.

Acknowledgements

This year's crew consisted of Ashlyn Kessler, summer intern, and David Pusateri, assistant. Their dedication and outstanding work ethic was much appreciated and 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 2016.

Month	Rainfall (in.)		Temperature (°F)		
	2016	Deviation from normal	2016	Deviation from normal	Days 90° or above
March			44.6	5.2	0
April	3.3	-0.4	51.2	0.4	0
May	5.1	0.7	63.0	0.4	0
June	6.6	2.0	75.4	3.7	11
July	6.1	2.2	74.8	-0.5	5
August	8.1	4.0	74.6	1.5	6
September	1.3	-2.2	70.0	5.7	5
October	<u>2.3</u>	<u>-0.5</u>	<u>58.7</u>	<u>6.2</u>	<u>1</u>
Totals	32.8	5.8		22.6	28

2016 Research Farm Projects

Project

Home demonstration garden
 Milkweed demonstration planting
 Effects of biochar on potato and sweet corn
 Evaluation of SCN-resistant soybean varieties
 Sweet corn herbicide evaluation
 Corn nitrogen stabilizer evaluation
 Lime effects on soil pH
 Soybean variety screening for SDS resistance
 Soybean seed treatment evaluations
 Soybean breeding project – SDS and Charcoal Rot
 SDS effects on soybean seed quality
 Cover crop effects on SCN populations
 Corn variety trial

Project Leader

C. Haynes
 R. Hellmich
 A. Nair
 G. Tylka/C. Marett/G. Gebhart
 V. Lawson
 V. Lawson
 A. Mallarino
 S. Ciano/G. Gebhart
 D. Mueller/S. Wiggs
 A.K. Singh/B. Scott
 S. Goggi/J. Knight
 C. Harback/G. Tylka
 J. Rouse/C. Arnold