

# Muscatine Island Research Farm Summary

RFR-A1504

## 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 Specialist ..... Brandyn Chapman

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

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

## 2015 Acknowledgements

The following companies have provided products or financial support during 2015.  
 Their cooperation and support is greatly appreciated.

BASF Corporation, 100 Park Avenue, Florham Park, NJ 07932  
 Bayer CropScience, P.O. Box 12014, Research Triangle Park, NC 27709  
 Hooks Point Irrigation, 3850 Xavier Avenue, Stratford, IA 50249  
 Muscatine Ag, 3094 170<sup>th</sup> Street, Muscatine, IA 52761  
 Muscatine Island Cooperative, 2420 57<sup>th</sup> Street, Muscatine, IA 52761  
 Syngenta Seeds, Inc., Rogers Brand, P.O. Box 4188, Boise, ID 83711-4188  
 Valent U.S.A. Corporation, P.O. Box 8025, Walnut Creek, CA 94596

## Farm and Weather Summary

Vince Lawson, farm superintendent

### Farm Comments

Justin Rinas, ag specialist since 2011, resigned April 2015. A search for a replacement was initiated during the summer and culminated in August when Brandyn Chapman started work as the new ag specialist. Brandyn is an ISU graduate in agriculture and previously worked at Remington Seeds in Minnesota.

In June, an electric, one tower, 229 ft long Reinke center pivot was erected in Field IJ. This unit replaces solid set irrigation pipe and a travelling hose gun previously used in the field. The self-propelled Reinke pivot provides more control and better water distribution making Field IJ more useful for growing crops and conducting research.

*Field days and tours.* The annual meeting of the Muscatine Island Research Farm Association was held on June 23, 2015, at the research farm in Fruitland. A wagon tour of the farm was followed by a catered meal and the association business meeting. A soybean seed treatment trial was the focus of an informational field day for commercial dealer reps on August 13. The Home Demonstration Garden field day was held on September 15 and featured fall vegetables including pumpkins, squash, heirloom tomatoes, peppers, sweet potatoes, and new flower and vegetable varieties. There also were presentations on fall bearing raspberries and current research on milkweed plantings to provide habitat for monarch butterflies.

*New projects.* Milkweed demonstration planting for monarch butterfly habitat, Richard Hellmich; Sweet corn plant population, Vince Lawson; Corn nitrogen use investigation, John Sawyer and Vince

Lawson; Transgenic soybean evaluation, Greg Tylka and Hal Moser (Bayer CropsScience); Lime effects on soil pH, Antonio Mallarino; and Field rating of soybean plant introduction lines for tolerance to charcoal rot and sudden death syndrome, A.K. Singh.

### Crop Season Comments

The corn crop was hurt by excessive rains during May, June, and early July that leached nutrients from the soil causing deficiencies, particularly nitrogen. By mid-summer the weather was conducive to the development of a rather severe infestation of Northern Corn Leaf Blight turning leaves brown by early August. Corn crop was harvested on October 12 and produced just under 170 bushels/acre. Yields were disappointing but grain moisture was 14 to 15 percent.

This spring's wet weather delayed soybean planting until May 21. But soybeans grew reasonably well during the season with no unusual problems and yielded 55 bushels/acre.

Melons and pumpkins produced good crops this season. Melons were grown on plastic mulch, which protected nutrients from leaching during the excessive spring rainfall. Good vine growth resulted in high yields of large, good quality, fruit. The main problem encountered was a concentrated fruit set due to cool wet weather delaying the early planted melons so they matured at the same time as later planted melons. Harvesting occurred between July 20 and August 17 with over half of the season's fruit picked during the first week of harvest.

### Weather Comments

Monthly rainfall and temperature averages for the 2015 growing season are presented in Table 1. Overall, the season provided rainfall and temperatures that were above normal. May, June, and July were notable for excessive rainfall amounts recording 7.3, 6.1, and 7.1 in.,

respectively. September was an unusually warm month with an average temperature of 70.1°F, 6 degrees above normal. September also provided six days with high temperatures exceeding 90°F. Monthly average temperatures during the rest of the season were closer to the norm. The growing season, as measured by days with above freezing temperatures, was 176 days long in 2015. The last freezing temperature (30°F) in the spring was recorded on April 23 and the first

freezing temperature (25°F) in the fall was recorded on October 17.

### Acknowledgements

This year's crew consisted of Andy Hansen, summer intern. His 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 2015.**

Month	Rainfall (in.)		Temperature (°F)		
	2015	Deviation from normal	2015	Deviation from normal	Days 90° or above
March	N/A	N/A	38.7	-0.4	0
April	2.0	-1.8	52.9	2.1	0
May	7.3	3.0	64.3	1.8	0
June	6.1	1.7	72.3	0.7	2
July	7.1	3.3	74.3	-1.1	5
August	3.0	-1.0	71.1	-2.0	2
September	3.5	0.1	70.1	5.9	6
October	2.5	0	54.9	2.6	0
Totals	31.5	5.3		9.6	15

### Research Farm Projects

#### Project

Home demonstration garden  
 Biochar use in home gardens  
 Milkweed Demonstration Planting  
 Nitrogen scavenging benefits of cover crops  
 Effects of biochar on cabbage and sweet potato  
 Evaluation of SCN-resistant soybean varieties  
 Potato herbicide evaluation  
 Sweet corn plant population observations  
 Corn nitrogen fertilizer study  
 Lime effects on soil pH  
 Soybean variety screening for SDS resistance  
 Soybean seed treatment evaluation  
 Soybean breeding line evaluations

#### Project Leader

C. Haynes  
 Y. McCormick/C. Haynes  
 R. Hellmich  
 A. Nair  
 A. Nair  
 G. Tylka/C. Marett/G. Gebhart  
 V. Lawson  
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 A. Mallarino  
 S. Cianzo/G. Gebhart  
 D. Mueller/S. Wiggs  
 A.K. Singh/B. Scott