2012

Muscatine Island Research Farm Summary

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Muscatine Island Research Farm Summary

Abstract
Includes Farm and Weather Summary and Research Farm Projects.

Keywords
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Disciplines
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Muscatine Island Research Farm Summary

RFR-A1126

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 ................................................................. Justin Rinas
Ag Specialist ................................................................. Myron Rees
Research and Demonstration Farms Manager ................ Dennis Shannon
32 Curtiss Hall, ISU
Research and Demonstration Farms Coordinator ............. Mark Honeyman
32 Curtiss Hall, ISU

2011 Acknowledgements

The following companies have provided products or financial support during 2011. Their cooperation and support is greatly appreciated.

Crookham Co., PO Box 520, Caldwell, ID 83606
Dubois Agrinovation, Inc., 478 Notre-Dame, C.P. #750, Quebec, Canada
Eastern Iowa Light & Power Coop, PO Box 3003, Wilton, IA 52778
Halane Farms, 2312 Fruitland Rd., Muscatine, IA 52761
Harris Moran Seed Co., PO Box 4938, Modesto, CA 95352
Hollar & Co., PO Box 106, Rocky Ford, CO 81067
Hook’s Point Irrigation, 3850 Xavier Avenue, Stratford, IA 50249
Rogers Brand, Syngenta Seeds, Inc., P.O. Box 4188, Boise, ID 83711-4188
Rispens Seeds, Inc., 1357 Dutch American Way, Beecher, IL 60401
Seneca Vegetable Research, 5267 Flat St., Hall, NY 14463
Siegers Seed Co., 13031 Reflections Dr., Holland, MI 49242
Stokes Seeds, Inc., PO Box 548, Buffalo, NY 14240
Sweetland Ag Tech, 3094 170th St., Muscatine, IA 52761
Farm and Weather Summary

Vince Lawson, farm superintendent

Farm Comments

Developments. Justin Rinas, our new agricultural specialist, started work at the research farm on May 2, 2011. His duties include taking care of the greenhouse in the spring, supervising summer help, and overseeing many of the daily activities at the research farm. Justin is a recently returned Peace Corps Volunteer and an ISU graduate ('03). He served as an Agriculture Volunteer in the Ecuadorian Andes of South America where he worked with indigenous farmers to increase production of potatoes, seed high quality pasture for sheep and dairy cattle, and establish a community agro-forestry nursery among other activities.

The two center pivot irrigation systems on the research farm received an upgrade this season making them more efficient and easier to operate. Recently installed REC power lines next to the farm made it feasible to trench electrical wire across the field to the center pivots. Submersible electrical pumps were installed in the wells and irrigation pivots were re-nozzled allowing them to operate at lower water pressures for power savings. This work was finished just in time as the dry and hot summer demanded frequent irrigations for good crop production. A big thank you goes out to Tom Langan, Halane Farms, Mark Latta, Latta Well and Pump, and to Mark Stumpenhorst, Hooks Point Irrigation, for their contributions in making this project successful.

New Projects. New this season was a trial evaluating several foliar applied products for ability to control soybean diseases as part of a project to optimize pest management practices in soybeans. Another new project looked at the response of potatoes and soybeans to sulfur fertilization. New cultivar trials included an evaluation of sixteen fresh market tomato cultivars.

Weather Comments

Overall, the 2011 growing season was dry and warm with rainfall 6.2 in. below normal and average monthly temperatures above normal for all months except March and September (Table 1). This created heavy reliance on irrigation for good crop production but reduced nutrient leaching and foliar disease development. As a result, crop yields and quality were generally good. The growing season, as measured by days with temperatures above freezing was 176 days in 2011. A low of 28°F was recorded on May 4 and the first freezing temperatures (26°F) in the fall were recorded on October 28.

Acknowledgements

Special thanks to the crew who helped get the work done: Justin Rinas, agricultural specialist; Kathleen Miller, summer intern; and Skylar Pieper, summer helper. Also thank you to Rick Peters and Shelley Lawson, who volunteered their time to help with melon harvest.
Table 1. Muscatine Island Research and Demonstration Farm, Fruitland, monthly rainfall and average temperatures for 2011.

<table>
<thead>
<tr>
<th>Month</th>
<th>2011 Rainfall (in.)</th>
<th>Deviation from normal</th>
<th>2011 Temperature (°F)</th>
<th>Deviation from normal</th>
<th>Days 90° or above</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>NA</td>
<td>NA</td>
<td>38.6</td>
<td>-0.5</td>
<td>0</td>
</tr>
<tr>
<td>April</td>
<td>3.73</td>
<td>0.05</td>
<td>50.9</td>
<td>0.2</td>
<td>0</td>
</tr>
<tr>
<td>May</td>
<td>4.22</td>
<td>-0.02</td>
<td>63.9</td>
<td>1.7</td>
<td>3</td>
</tr>
<tr>
<td>June</td>
<td>6.11</td>
<td>1.66</td>
<td>72.3</td>
<td>0.9</td>
<td>5</td>
</tr>
<tr>
<td>July</td>
<td>1.95</td>
<td>-1.95</td>
<td>81.5</td>
<td>6.0</td>
<td>21</td>
</tr>
<tr>
<td>August</td>
<td>0.55</td>
<td>-3.53</td>
<td>76.1</td>
<td>2.9</td>
<td>12</td>
</tr>
<tr>
<td>September</td>
<td>2.89</td>
<td>-0.62</td>
<td>61.1</td>
<td>-2.9</td>
<td>3</td>
</tr>
<tr>
<td>October</td>
<td>0.86</td>
<td>-1.83</td>
<td>54.4</td>
<td>2.1</td>
<td>0</td>
</tr>
<tr>
<td>Totals</td>
<td>-6.24</td>
<td></td>
<td>10.4</td>
<td></td>
<td>44</td>
</tr>
</tbody>
</table>

Research Farm Projects

**Project**                            **Project Leader**
AAS vegetable trial                     V. Lawson
Home demonstration garden                C. Haynes
Cherry tree cultivar demonstration       J. Hannan
Degradable mulch evaluation              V. Lawson
Evaluation of SCN-resistant soybean varieties G. Tylka/C. Marett/G. Gebhart
Potato response to boron and sulfur fertilizer V. Lawson
Soybean white mold control study         A. Robertson/S. Wiggs
Soybean response to sulfur fertilizer    V. Lawson
Sweet corn cultivar trial                V. Lawson
Tomato cultivar trial                    V. Lawson
Melon cultivar and spacing observations  V. Lawson