

Farm and Weather Summary

Vince Lawson, farm superintendent

Farm Comments

Developments. June 1 started as just another day, nothing out of the ordinary, calm winds and a grey cloudy sky. That morning we transplanted the last of the melons and did some weeding. But at lunchtime, suddenly and with little warning, an F2 tornado with winds up to 140 miles per hour cut a path of destruction from Grandview through Fruitland and then to Muscatine in minutes. Fruitland was hit hard losing dozens of homes along with its post office and city hall. There were injuries, but thankfully, no deaths. As we helped the town clean-up in the days that followed it became apparent how lucky we had been at the research farm. We had power restored within a few days, downed tree limbs were picked up quickly, and crop damage was confined to early-planted cucurbits which had large vines at the time. Other locations weren't so lucky. There were several center pivot irrigation systems destroyed in the area but miraculously our two were okay just a few blocks from the tornado's path. This fall it is heartening to see activity and rebuilding in the tornado damaged areas. This will be a season not soon forgotten.

Field Days and Tours. The annual meeting of the Muscatine Island Research Farm Association was held on March 6, 2007, at the Elms Restaurant, Muscatine, IA. Association business was discussed and board of directors elected. The Home Demonstration Garden Tour was Tuesday evening, June 12, and displayed a variety of cool-season plants such as lettuce, cabbage, and pansies. Attendees also sampled several strawberry varieties. The Summer Farm Tour on August 14 featured the newly installed, eight acre, subsurface drip irrigation system. A soybean rust "first detector" training meeting was held at the farm on August 22.

New Projects. A soybean growth and development study led by Dr. Palle Pedersen was initiated this season to identify factors influencing yield related to planting date in the spring. We also participated in a cooperative Midwest project to monitor aphid movement and spread of aphid-transmitted viruses in snap beans, soybeans, and non-crop areas. Dr. Hank Taber conducted a tomato herbicide study that looked at the use of different herbicides with transplanted tomatoes for their effect on plant growth and fruit yield. Our biggest new development was the installation of an eight acre subsurface drip irrigation (SDI) system. It is a permanent installation with plastic drip lines buried 18 in. deep and spaced 60 in. apart in a field divided into 12 operating zones.

Weather Comments

Spring 2007. The 2007 growing season was slightly longer than normal consisting of 192 days without freezing temperatures (April 15 to October 25). Generally, normal amounts of rainfall fell during the spring but temperatures were above normal during March and May allowing timely planting and quick crop establishment.

Summer 2007. A tornado that barely missed the farm on June 1 was the most dramatic weather event of the summer. It caused some crop damage to early planted vine crops but probably wasn't as damaging to most crops as the erratic rainfall during the summer. June, July, and August all produced above normal rainfall, but it was not timely with long stretches of drought punctuated with periods of excess. There was no rainfall during the critical crop growth period of June 8 to June 21 followed by over 5 in. of rain on June 22 and 23 and then another drought that wasn't broken until July 16. The 3.6 in. of rain received from August 19 to 24 caused ponding and saturated fields again.

Fall 2007. Fall delivered close to normal rainfall and warmer than normal temperatures which facilitated harvest and helped end the season on a more positive note. Good yields of field corn and soybeans were reported in the area. A light freeze (31.7°F) occurred October 25 and a killing freeze (24.4°F) occurred November 2, 2007. October 10 is our average first freeze date in the fall.

Acknowledgements

I would like to thank our crew for their hard work and efforts during the 2007 season: Joe Hannan and Myron Rees, ag specialists; Andrew Gieselman, ISU summer intern; and Charles Rickey seasonal employee.

Table 1. Muscatine Island Research and Demonstration Farm, Fruitland, monthly rainfall and average temperatures for 2007.

Month	Rainfall (in.)		Temperature (°F)		
	2007	Deviation from normal	2007	Deviation from normal	Days 90° or above
March	NA	NA	46.3	8.2	0
April	4.04	0.45	47.8	-3.1	2
May	3.39	-0.74	68.5	6.5	2
June	6.41	2.28	70.6	-1.0	8
July	4.45	0.66	75.0	-0.6	7
August	6.65	2.66	77.8	4.7	15
September	2.58	-0.96	66.0	1.7	9
October	<u>3.03</u>	<u>0.39</u>	58.3	6.2	<u>2</u>
Totals	30.55	4.74			45