

Developments at Northern Research and Demonstration Farm

David Rueber, farm superintendent

To test whether some of the newer shrub cultivars are suited to northern Iowa, an ornamental shrub area was planted with 21 different types of shrubs. The area is south of the machine sheds. The small fruit and cherry orchard was expanded to include four more types of brambles and one more cultivar of blueberries. Grazing chickens in a movable vehicle called a "chicken tractor" also was tried this year.

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The mention of firm names or trade products does not imply endorsement over other firms or similar products not mentioned.

2001 Crop Season

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The year 2001 started with 11 inches of snow on the ground, which limited the frost penetration to the top few inches of the soil. By March 1, the ground had thawed, a month earlier than normal. March 2001 was the second-coldest March recorded at the farm since 1972 (Table 1).

Winter ended the third week of April with the last snowfall (a trace) on the 17th, and the last killing frost (26°F) on the 18th. Fieldwork on the farm started April 17 with fertilizer spreading. Oats were planted April 26, and corn was planted April 27–30, until work was stopped by rain. Rains continued into May, with May 2001 being the second-wettest May since 1949. Corn planting resumed May 12, and soybean planting began May 16. Due to the wet conditions, many experiments had poor stands. Three experiments were so poor they were replanted.

The first part of June 2001 was cool, which slowed crop development. The remainder of June was warmer than normal, with only four days below 80°F. The warm weather helped the crops make up for the slow start.

During the hot weather of early July, crop roots could not keep up with the moisture demand, and corn leaves were rolling by noon. Timely

rains in the middle of the month lessened moisture stress during the critical corn pollination period, and the corn pollinated well. On July 24, a storm and high winds severely lodged corn on the farm. Rains in mid-August and high humidity helped the crops survive an overall dry August.

The first killing fall frost of 2001 was October 6. The corn, except for the late, replanted fields, was mature by then. Soybean harvest started on October 1, followed by corn harvest on October 16. Dry weather in October allowed the crops to be harvested at reasonable moisture levels and fieldwork to be completed by November 8.

Corn yields were below previous years, ranging from 100 bushels in lodged late-planted plots to 150 bushels/acre in the early planted plots with no lodging. Soybean and oat yields were about average, around 50 bushels/acre and 75 bushels/acre respectively. Hay yielded well, about 4.5 to 5.5 tons/acre.

The year ended with November being the warmest and December being the second warmest since 1971. On December 3, the warm weather allowed extensive soil sampling to be done in comfort. It also allowed the rains to fully recharge the soil profile. Just before Christmas, the ground froze to a depth of 8 inches.

Table 1. Monthly precipitation, average temperature, and departure from normal for 2001.

Month	Precipitation (in.)			Temperatures (°F)		
	2001	Normal	Departure from normal	2001	Normal	Departure from normal
January	1.14	0.59	0.55	19.7	15.2	4.5
February	1.90	.66	1.24	15.4	20.9	-5.5
March	1.13	1.77	-0.64	27.0	34.5	-7.5
April	3.70	2.91	0.79	52.9	47.8	5.1
May	8.67	3.67	5.00	61.4	60.1	1.3
June	4.33	4.56	-0.23	70.2	69.1	0.8
July	5.33	4.19	1.14	75.2	72.4	2.8
August	2.56	3.72	-1.16	72.1	69.7	2.4
September	2.81	3.64	-0.83	61.1	62.0	-1.0
October	1.37	2.19	-0.82	50.3	50.3	0.0
November	2.59	1.43	1.16	47.4	34.1	13.3
December	1.76	1.00	0.76	28.5	19.4	9.1
Totals	37.29	30.33	6.96	Avg. 48.4	46.3	2.1