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# 2001 Crop Season

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**Abstract**
Soil moisture levels were adequate to surplus going into the growing season, due in part to heavy precipitation during the fall and winter months of 2000/2001. March precipitation was below average, but little, if any, fieldwork was done during this time because the soils stayed cool and wet. Small-grain planting and anhydrous ammonia applications were not made until mid–April, but corn and soybean planting were not far behind. Planting began on April 18 and continued through April 20, when heavy rain prevented fieldwork until April 30. Planting then continued through most of May despite more heavy rains. Little fieldwork was done between May 3 and June 10, after which most of the remaining crops were planted.

**Disciplines**
Agricultural Science | Agriculture

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The research farm received 31.93 inches of precipitation during the growing season (March through October), as shown in Table 1. This amount was 5.86 inches above average for the Washington area. The months with above-average precipitation were April, May, September, and October. These were months when much of the fieldwork was done, and this surplus precipitation delayed operations on numerous occasions. On the other hand, the three summer months of June, July, and August were all below average for rainfall. This dry period may have stressed the crops to a certain degree, especially the late-planted corn.

Temperatures were slightly below average overall for the growing season. March was much below average; however, April temperatures were much above average. Above average April temperatures helped warm the soils and allowed the crops that were planted sprout quickly. After April, temperatures turned cooler than average for the remainder of the growing season. These cooler temperatures may have reduced crop stress during the summer months. Unfortunately, crops also were slow to dry during the cool, wet months of September and October.

Weed control was an interesting issue in 2001. The early planted fields were clean for the most part. However, weeds got off to a head start in the late-planted fields. Some weeds were three to four feet tall before any weed control strategies were applied. But most of the weed problems were solved by late June.

Oat yields were better than expected given the April 19 planting date. The variety trials averaged 131.0 bushels/acre, and test weights were good as well. As for the winter wheat trials, these plots were discarded after much of the area was killed out during the winter.

Corn yields varied somewhat. The early planted corn yielded from between 150 and 200 bushels/acre, whereas corn planted in June yielded from between 115 and 135 bushels/acre. The late-planted corn may have yielded better, but European corn borer feeding damaged some of this corn. Additionally, most of this late corn was damaged by a killing frost on October 6.

Soybeans yielded from nearly 40 to nearly 65 bushels/acre. Mid—April-planted soybeans and June-planted soybeans both yielded less than the early May-planted soybeans. However, some June-planted soybeans did yield in the 55-bushel/acre range.

There were no major problems this year for soybeans. Bean leaf beetles were a big concern at the start of the growing season; however, counts were generally low compared to a year ago. Unfortunately, a new concern arose last year when soybean aphids were discovered in some of the soybean studies; however, populations were very low.

Harvest ran later than normal this year. This was due in part to the late-planted crops. Also, crops dried slower this year in general, and this delayed the start of harvest. Moreover, wet weather early in the fall reduced the number of days that harvesting could be done. Nevertheless, November weather improved, and harvest was completed by November 6.

Favorable weather continued well into December, allowing all fall tillage and fertilizer applications to be made.

Soil moisture reserves appear to be adequate going into next year's growing season. However, timely rains certainly will be needed during the upcoming year.

**Table 1. Monthly precipitation and average monthly temperatures for the 2001 growing season.**

| | Precipitation (in) | | | Temperature (°F) | | |
|---|---|---|---|---|---|---|
| Month | 2001 | Average[a] | Deviation | 2001 | Average[a] | Deviation |
| March | 1.93 | 2.49 | -0.56 | 32.7 | 37.3 | -4.6 |
| April | 4.17 | 2.04 | +2.13 | 56.0 | 52.1 | +3.9 |
| May | 8.49 | 3.85 | +4.64 | 62.4 | 63.2 | -0.8 |
| June | 3.14 | 4.27 | -1.13 | 69.4 | 72.2 | -2.8 |
| July | 3.14 | 4.20 | -1.06 | 75.9 | 76.1 | -0.2 |
| August | 2.10 | 3.76 | -1.66 | 72.7 | 74.0 | -1.3 |
| September | 4.43 | 2.85 | +1.58 | 61.6 | 66.2 | -4.6 |
| October | 4.53 | 2.61 | +1.92 | 51.4 | 55.3 | -3.9 |
| Total[b]/ Average[c] | 31.93 | 26.07 | +5.86 | 60.3 | 62.1 | -1.8 |

[a] Average precipitation and temperatures recorded at the U.S. Weather Bureau Station, Washington, IA.
[b] Only precipitation data totals were included.
[c] Only averages for monthly temperature data were determined.

# Field Days

Kevin Van Dee, superintendent

Three scheduled events were held at the farm in 2001. There also were numerous meetings at the farm involving diverse groups of people. These events and meetings provided visitors with opportunities to learn more about current agricultural topics.

Two mainstay events were the spring and fall field days. These events focused mainly on crop research. The spring field day was held June 28, 2001. Activities included review of a conservation tillage study, discussion of bean leaf beetle and bean pod mottle virus, a report on in-season nitrogen applications for soybeans, and a report on low cost alternatives for weed control in corn. A program for certified crop advisors also was provided in the morning. The fall field day was held on September 6. Topics included the tiling study, prevented planting acres, this year's weeds becoming next year's problem, and nitrogen and sulfur studies conducted at the farm.

There was one horticultural event held at the farm in 2001—the garden and small acreage field day, held August 2. There were demonstrations of All–American Selection varieties for 2002; a plastic mulch trial for tomatoes using black, clear, red, and green plastic mulch; a demonstration of compact plants including varieties of cantaloupe, cucumber, squash, watermelon, and pumpkin. There was also a display of plants with a chicken theme that included celosia (cockscomb), chickpeas, eggplant, and gilfeather (turnips).

The chicken theme in the garden coincided with our first year of raising free-range chickens at the farm. In 2001, 99 Rock–Cornish pullets were raised and marketed using the chicken "tractor" method. With this method, the chickens were raised in a portable pen, or "tractor," that was moved to new pasture daily. The chickens also were fed a ration of ground corn, soybean meal, poultry base, and vitamins and minerals, but their main ration contained no antibiotics, by-products, growth promotants or hormones. However, they were fed a premix ration during the first week that contained some medication, although there was no specific need for this medication.

The free-range chickens were sold directly to the consumer. Both rural and urban customers bought the chickens, with 54% of the chickens going to rural customers and 46% going to urban customers. Marketing strategies included flyers and posters placed in high traffic areas, newspaper ads, and word-of-mouth. These strategies were all somewhat successful, but longterm sales seemed dependent on repeat customers.

Other meetings at the farm in 2001 included garden clubs; local extension council meetings from Henry, Johnson, Louisa, and Washington counties; and producer groups interested in becoming ISO 9000–2000 certified. The ISO meetings were designed to assist producers in establishing quality standards and documentation for their operations. The ISO quality system is a way to document what producers do, with an independent third-party providing the documentation. Participating producers hope to gain market access and garner higher premiums for their products in a system that emphasizes identity preservation of products raised.

More than 950 people visited the research farm this past year, and many individuals were responsible for this high attendance. These individuals included dedicated ISU research and extension personnel as well as the farm staff. Their efforts are greatly appreciated.