

2000 Growing Season at the Northwest Research Farms

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The weather was notable again this year. Mild winter temperatures allowed soil absorption of melting snow and early spring rain. The result was a doubling of the subsoil moisture total to 8.9 in. this spring from 4.5 in. last fall.

Temperatures warmed in March, and we started fieldwork March 27. Rainfall was light and scattered through the planting season and allowed for timely operations. Corn planting started on April 14 and soybeans on April 26. Some producers in the area were done planting by May 1.

Rainfall continued to be below normal but timely through the middle of June. Rainfall decreased by the end of the month. In July, rains were light and did little to improve dry conditions. With normal temperatures crops started to show signs of stress. Many early-planted crops pollinated well despite the conditions. Later planted corn had more barren stalks and some unfilled ears. In early August, relief came in the form of 5.4 in. of rain in a two-week period that gave crops a recharge to finish the season.

The weather again turned dry in September with only .94 in. for the entire month. This set the stage for an early harvest, and we began combining soybeans on September 18. In early October we had several light rains and switched to corn harvest on October 3. Grain

was dry and yields were better than expected. The growing season was 3 days shorter than normal (Table 1). Average yields for the farm were 43 bushels/acre for soybeans and 117 bushels/acre for corn. This was the second straight year we harvested extremely dry grain. Overall the farm was 6 in. of rain below normal for the growing season (Table 2).

Locally, moisture was extremely variable. Areas within a few miles of the farm received significantly more rain. There were counties, including O'Brien County, that had both drought and flooding this season. Interestingly, the farm at Doon had more rain and better corn yields (134 bu/acre) than the farm at Sutherland because of 5 in. more rain during the growing season (Table 3).

Despite any weather problems, we had an outstanding year. Thank you to everyone who helped make that possible. If you have questions or any comments for us, stop by the farm. You can contact us by mail or phone at:

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For more weather information check the web page: <http://www.meteor.iastate.edu/agclimate/>

Table 1. Sutherland growing days.

| | | |
|----------------------|--------------------|--------------|
| Last frost (spring) | 32 degrees or less | April 21 |
| First frost (fall) | 23 degrees or less | September 21 |
| Frost free days | 153 | |
| Avg. frost-free days | 156 | |

Table 2. Monthly rainfall and average temperature during the 2000 growing season at the Northwest Research Farm, Sutherland.

| Month | Rainfall | | Temperature | | Number of days temp. over 90° or above |
|-----------|-------------|------------------------------------|------------------|----------------------------------|--|
| | At the farm | Departure from normal at the farm* | At the farm in F | Departure from normal at Sanborn | |
| April | .69 | -1.81 | 47.5 | +1.4 | 0 |
| May | 2.90 | -0.85 | 61.4 | +2.3 | 0 |
| June | 2.81 | -1.64 | 65.9 | -2.7 | 4 |
| July | 1.92 | -1.66 | 71.0 | -2.1 | 2 |
| August | 5.40 | +1.63 | 71.1 | +1.0 | 4 |
| September | 0.94 | -2.20 | 63.0 | +1.9 | 4 |
| October | <u>2.53</u> | <u>+0.45</u> | 52.0 | <u>+3.2</u> | <u>0</u> |
| Total | 17.19 | -6.08 | | +5.0 | 14 |

*Normal rainfall recalculated 1993.

Table 3. Monthly rainfall and average temperature during the 2000 growing season at the Northwest Research Farm, Doon.

| Month | Rainfall | | Temperature | | Number of days temp. over 90° or above |
|-----------|----------------|---------------------------------------|----------------|--------------------------------------|--|
| | At Rock Rapids | Departure from normal at Rock Rapids* | At Rock Rapids | Departure from normal at Rock Rapids | |
| April | 3.62 | +1.81 | 43.9 | -3.1 | 0 |
| May | 4.42 | +1.48 | 60.4 | +1.0 | 0 |
| June | 2.52 | -1.56 | 66.6 | -2.6 | 5 |
| July | 3.90 | +0.59 | 72.8 | -1.3 | 6 |
| August | 2.24 | -1.55 | 71.0 | 0.0 | 5 |
| September | 2.78 | -0.20 | 61 | 0.0 | 4 |
| October | <u>2.89</u> | <u>+0.99</u> | 51.6 | <u>+2.8</u> | <u>0</u> |
| Total | 22.37 | +1.56 | | -3.2 | 20 |

*Normal rainfall recalculated 1994.