

September 14, 2007

N.D. Summer 2007 Temperatures in Top 20

Summer 2007 was the 20th warmest in North Dakota since 1895.

“While there were pockets of cooler-than-normal temperatures observed in North Dakota, a majority of the state had observed above-normal temperatures,” says Adnan Akyuz, state climatologist and assistant professor of climatology in North Dakota State University’s Soil Science Department.

“The warmest parts were, unfortunately, the drought-stricken areas in the southwestern parts of the state, where daily temperatures were 3 to 4 °F above the normal during the three-month period from June through August,” adds Akyuz, who analyzed the summer temperature data in a historical perspective for North Dakota.

When the soil is dry, all of the solar radiation is used to heat the atmosphere just above the land, causing a “positive feedback,” which heats the atmosphere even further.

“The bad news does not stop there,” Akyuz says. “Prolonged feedback provided opportunity for a local high-pressure center to linger in the area for a long time, deflecting storm systems elsewhere, in turn causing the dry period to last longer.”

Average summer temperatures rose with varying rates during the past 113 years. The largest trend was 0.7 °F per decade during the first 40 years from 1895 through 1935. However, from 1936 to 1970, the summer temperatures fell on the average of 0.2 °F per decade. Since 1971, summer temperatures increased slightly at the rate of 0.1 °F per decade.

For more information about summer temperatures and other state climate data, visit the North Dakota State Climate Office Web site at www.ndsu.edu/ndsco. The site contains a variety of monthly, seasonal and annual historical observations.

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NDSU Agriculture Communication

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