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Nebraska irrigates the most acres Experts say state has maxed out.

BY DAVID HENDEE

LINCOLN — When it comes to water and irrigation, Nebraska rules the waves.

No other state has a fresh water sea as large as the aquifer under Nebraska. No state pumps more water from the ground for crops than Nebraska.

Now Nebraska ranks No. 1 in another category. No state irrigates more farmland acres than Nebraska.

But a half-century of explosive growth in pumping underground water for crops has strained Nebraska's greatest natural resource.

Nebraska's growth comes as the number of irrigated acres is declining in many parts of the country and could signal significant limitations on future irrigation in the state, said Bruce Johnson, a University of Nebraska- Lincoln agricultural economist.

Some areas of Nebraska are over-irrigated, Johnson wrote in the current issue of Cornhusker Economics.

"We have a very precious water resource in this state ... and we're developed pretty much to the max," he said.

Johnson said the increase in irrigated acres puts certain areas of the state at risk for being classified by water managers as over appropriated. That means water demand isn't sustainable with existing supply. About 30,000 irrigated acres may have to revert to nonirrigated farmland acres as a result, he said.

About half the state's basins are currently designated by the Nebraska Department of Natural Resources as fully or over appropriated.

Nebraska slipped past California, which is more than twice the size of the Cornhusker state, in the latest irrigated-acres ranking by the 2007 Census of Agriculture, a special census done by the federal government every five years.

Nebraska accounts for about 1 of every 6 acres of U.S. irrigated farmland.

At the beginning of last year, Nebraska had 8.5 million acres under irrigation. The state added 560,000 irrigated acres from 1997 to 2002 and 930,000 acres between 2002 and 2007.

California's irrigation decline is attributed to drought and demand for water by cities. California's irrigation acres stood at 8.2 million in 2007, down from 8.71 million in 2002.

Johnson said the quality of Nebraska's irrigated agriculture is impressive. Three of every four irrigated acres is under center pivot irrigation. An estimated 52,000 center-pivot systems operated in Nebraska in 2005, and that number has increased, he said.

Irrigated agriculture adds billions of dollars to the state's economy. A Nebraska Policy Institute report said irrigation added \$4.5 billion to the economy in the drought year 2003.

Nebraska's irrigated acreage is spread across all 93 counties. Custer and Lincoln Counties experienced the largest increases in the 10-year time period, 61 percent and 56 percent, respectively.

The Legislature this year passed a law putting significant restrictions on further groundwater development for irrigation purposes.

"In short, there is no more development frontier," Johnson wrote. "From now on, Nebraskans, from the individual water user up through our policy arena, will need to wisely manage our water resources for a sustainable future."