Nebraska Leads in Irrigated Land

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Nebraska Leads in Irrigated Land

**Nebraska is #1.** According to the most recent U.S. 2007 Census of Agriculture (released in February of this year), Nebraska now has more irrigated farmland than any other state. It is common knowledge to observers of our agricultural economy that our state has been in an irrigation expansion mode for several years. But what may be surprising to many is that simultaneously, other major irrigation areas of the country have witnessed reduced irrigated acreage.

Looking at the top five states in terms of irrigated acres over the three census benchmark years of 1997, 2002 and 2007, Nebraska added 560,000 acres from 1997 to 2002, and another 930,000 acres between 2002 to 2007 (Figure 1 on next page).

By the end of 2007, Nebraska had 8,560,000 acres under irrigation. In contrast, California, which historically has exceeded all other states, dropped their irrigated acreage by nearly 900,000 acres between 1997 and 2007, with the bulk of that decline occurring between 2002 and 2007. Multi-year drought conditions and the ever-growing demands for water by California’s metro areas have, no doubt, contributed to this decline in irrigated acreage. And given the population pressures for water, it is virtually certain that California’s irrigated acres will continue to decline. As for the other major irrigated states, only Arkansas has experienced consistent growth over time. In fact, Texas, which shares part of the vast Ogallala Aquifer with Nebraska, has experienced reduced irrigated acreage of some 750,000 acres between 1997 and 2007, as aquifer levels have declined.

Not only is Nebraska’s volume of irrigated acreage significant, accounting for about one out of every six acres of irrigated land in the U.S., but the **quality** of our irrigated agriculture is impressive as well. The bulk of the state’s irrigated acreage, about three out of every four acres, is under center-pivot irrigation. In 2005, there were an estimated 52,000 center pivot systems operating in Nebraska and, obviously, that number has continued to increase up to the pre-
sent. Center pivot technology, which essentially had its initial roots in Nebraska, has proven to be a very efficient means of irrigation, with considerably higher levels of water application efficiency than what is possible under gravity-forms of irrigation.

Our state’s irrigated acreage is spread across all 93 counties, but there is considerable variation to be sure (Figure 2).

Areas of the state not overlaying the Ogallalla Aquifer, such as extreme Southeast Nebraska, and areas with more marginal cropland such as the Western Sandhills Region, have very limited acreage under irrigation. In contrast, there are counties where the majority of cropland is presently being irrigated.

Table 1 lists the top 25 counties in terms of irrigated acreage in 2007, and their respective changes in acreage over the previous five years. Custer and Lincoln counties experienced the largest increases over the time period, 61 and 56 percent, respectively.

Although Nebraska is the leading state in irrigation, the state has essentially reached its maximum development limits.

Major portions of Nebraska are already designated as either fully appropriated, or over appropriated. In addition, the Lower Platte Basin, which accounts for much of the remaining irrigated areas of the state is not yet fully developed, but will still have significant limitations on further groundwater development as a result of legislation passed in April of this year (see April 22, 2009 Cornhusker Economics). In short, there is no more development frontier. 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.

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