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## Irrigation Development Continues in Nebraska

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# Cornhusker Economics

## Cooperative Extension

Institute of Agriculture & Natural Resources  
Department of Agricultural Economics  
University of Nebraska – Lincoln  
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### Irrigation Development Continues in Nebraska

Market Report	Yr Ago	4 Wks Ago	1/28/05
<b><u>Livestock and Products,</u></b>			
<b><u>Weekly Average</u></b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight . . . . .	\$82.31	\$86.57	\$86.68
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb . . . . .	113.61	116.56	126.16
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb . . . . .	88.58	109.19	104.82
Choice Boxed Beef, 600-750 lb. Carcass . . . . .	140.80	143.43	148.11
Western Corn Belt Base Hog Price Carcass, Negotiated . . . . .	56.04	66.75	73.79
Feeder Pigs, National Direct 45 lbs, FOB . . . . .	36.86	61.91	65.62
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean . . . . .	60.37	70.68	73.78
Slaughter Lambs, Ch. & Pr., 90-160 lbs., Shorn, Midwest . . . . .	90.00	94.00	110.00
National Carcass Lamb Cutout, FOB . . . . .	205.18	244.55	249.33
<b><u>Crops,</u></b>			
<b><u>Daily Spot Prices</u></b>			
Wheat, No. 1, H.W. Omaha, bu . . . . .	3.87	3.38	3.26
Corn, No. 2, Yellow Omaha, bu . . . . .	2.56	1.77	1.77
Soybeans, No. 1, Yellow Omaha, bu . . . . .	8.08	5.24	5.18
Grain Sorghum, No. 2, Yellow Columbus, cwt . . . . .	4.46	2.59	2.45
Oats, No. 2, Heavy Minneapolis, MN, bu . . . . .	1.74	1.80	1.91
<b><u>Hay</u></b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton . . . . .	115.00	115.00	115.00
Alfalfa, Large Rounds, Good Platte Valley, ton . . . . .	62.50	62.50	62.50
Grass Hay, Large Rounds, Good Northeast Nebraska, ton . . . . .	57.50	57.50	57.50
* No market.			

Attribute it to the multi-year drought, the threat of future well-drilling moratoriums or an increase in farm income. Whatever the case, there has been a significant swell in new irrigation wells in Nebraska over the past eight years. This increase has been nothing less than tremendous for the last three years.

The number of new irrigation wells in Nebraska from 1997-2004 is shown on the following page in Table 1. This table does not include replacement wells. A total of 5,266 new irrigation wells were drilled in 1997-2002. Table 2 shows an increase of 559,614 irrigated acres which occurred during this same period. If we divide the number of new irrigation wells by the number of new irrigated acres, we can estimate that the average new well irrigates approximately 100 acres.

With this in mind, we could multiply the new 3,357 irrigation wells from 2003-2004 by 100, and determine that approximately 335,000 additional irrigated acres were developed in the last two years alone. This would suggest a considerably larger irrigated acreage base than the 2002 Census benchmark. Some of these wells, however, were drilled as supplemental water sources for land already being irrigated by surface water sources. Nonetheless, Nebraska is now at an irrigated acreage base approaching 8 million acres.

The top 20 irrigation states alone account for 92 percent of the total U.S. irrigated acres, also shown in Table 2. Nebraska has always been a leading irrigation state. Ranking number two in the nation behind California, Nebraska accounts for nearly 14 percent of all irrigated acres in the U.S. Nebraska ranks number one in groundwater irrigated acres, accounting for about 22 percent of all groundwater irrigated acres in the U.S.

Between the years of 1997-2002, only seven of the twenty leading irrigation states increased their number of irrigated acres. Leading these seven, Nebraska increased its irrigation base by nearly 8 percent or 559,614 acres, more than the acreage growth of the next four states combined.

**Table 1. New Nebraska Irrigation Wells**

Year	New Wells
1997	1,067
1998	877
1999	507
2000	738
2001	782
2002	1,295
2003	1,706
2004	1,651

Source: Nebraska Department of Natural Resources

What has driven all of this new growth in irrigation wells, especially in the last three years? A small impact is from the increase in farm income the last two years. This trend was shown in 1997, and again in 2003 and 2004, when the number of new wells spiked during these periods of above-average farm income. Undoubtedly though, it is fueled primarily from drought conditions and landowner concerns of future well-drilling moratoriums. The tendency is that with the anticipation of drilling moratoriums, there is an increased drilling of new irrigation wells. Ironically, this increase in irrigation wells only accelerates the water depletion rate that the moratoriums are created to protect.

This is a good example of the ‘Tragedy of the Commons’. In this case a common resource, groundwater, is used by many producers following a “use it or lose it” logic. The result of this self interest can lead to the collapse of the groundwater

productive capacity for future use and generations. This is not only detrimental to society, but the individuals’ long-run interests as well.

According to a recent state study initiated by the legislature, some of Nebraska’s water is rapidly becoming fully appropriated or over-appropriated. This is especially true in parts of the Panhandle, as well as areas in Southwest and South Central Nebraska. This would seem to suggest that we are nearing the height of our irrigated acreage base. However, considering the additional acres that are not irrigated but have the potential, and the prospect of continued drought, it is unlikely that there will be any aggregate decrease in statewide irrigated acres in the foreseeable future. In fact, we are more likely to see some continued expansion. All things considered, we should feel fortunate that we have this natural resource at our disposal, being ever mindful of our responsibility to practice good stewardship.

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**Table 2. Leading Irrigation States**

Geographical Area	Irrigated Acres			Rank		
	2002	1997	1992	2002	1997	1992
United States	55,311,236	56,289,172	49,404,030			
20 Leading States	50,812,487	52,266,055	45,703,882			
California	8,709,353	8,886,693	7,571,313	1	1	1
Nebraska	7,652,170	7,065,556	6,311,633	2	2	2
Texas	5,074,638	5,764,295	4,912,308	3	3	3
Arkansas	4,149,766	3,785,338	2,701,651	4	4	7
Idaho	3,288,522	3,543,805	3,260,006	5	5	4
Kansas	2,678,277	2,695,816	2,680,343	6	7	6
Colorado	2,590,604	3,374,233	3,169,839	7	6	5
Montana	1,976,111	2,101,548	1,978,167	8	8	8
Oregon	1,970,627	1,963,478	1,622,235	9	9	9
Washington	1,823,155	1,787,120	1,641,437	10	11	11
Florida	1,815,174	1,873,823	1,782,680	11	10	10
Wyoming	1,541,688	1,749,908	1,464,585	12	12	12
Mississippi	1,175,530	1,110,145	882,976	13	14	19
Utah	1,091,011	1,218,474	1,142,514	14	13	13
Missouri	1,032,973	921,113	708,864	15	17	20
Louisiana	938,841	960,831	897,641	16	16	17
Arizona	931,735	1,075,336	956,454	17	15	14
Georgia	870,710	773,066	724,792	18	19	18
New Mexico	844,799	851,735	738,272	19	18	16
Nevada	746,653	763,742	556,172	20	20	15

Source: 2002 Census of Agriculture; <http://www.nass.usda.gov/census/census02/fris/fris03.htm>