

2013

Nebraska's Irrigated Acreage Continues to Grow

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CORNHUSKER ECONOMICS

University of Nebraska–Lincoln Extension

Nebraska's Irrigated Acreage Continues to Grow

Market Report	Yr Ago	4 Wks Ago	11/15/13
<u>Livestock and Products,</u>			
<u>Weekly Average</u>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$125.39	\$ *	\$131.16
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.....	161.63	189.12	189.53
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.....	145.49	169.19	172.36
Choice Boxed Beef, 600-750 lb. Carcass.....	193.17	*	202.25
Western Corn Belt Base Hog Price Carcass, Negotiated.....	74.51	91.26	79.87
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	82.99	95.26	92.94
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct.....	91.95	*	159.75
National Carcass Lamb Cutout, FOB.....	300.87	300.48	340.62
<u>Crops,</u>			
<u>Daily Spot Prices</u>			
Wheat, No. 1, H.W. Imperial, bu.....	8.06	7.30	6.58
Corn, No. 2, Yellow Nebraska City, bu.....	7.32	4.26	4.08
Soybeans, No. 1, Yellow Nebraska City, bu.....	13.63	12.46	12.54
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	12.34	7.25	7.25
Oats, No. 2, Heavy Minneapolis, MN, bu.....	3.79	3.53	3.71
<u>Feed</u>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	220.00	250.00	*
Alfalfa, Large Rounds, Good Platte Valley, ton.....	215.00	145.00	135.00
Grass Hay, Large Rounds, Good Nebraska, ton.....	212.50	122.50	115.00
Dried Distillers Grains, 10% Moisture, Nebraska Average.....	284.50	205.00	211.00
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.....	106.00	63.00	59.50
*No Market			

Nebraska's irrigated acreage base expanded by more than 930,000 acres between the 2002 and 2007 Census of Agriculture years, to an official 8.56 million acres. This moved the state ahead of California to be ranked first in the nation regarding largest crop acreage under irrigation. Since that last census benchmark, significant changes in irrigated acreage across Nebraska have occurred with the rapid rise in commodity prices and the drought of 2012.

Release dates of information from the latest 2012 Census of Agriculture are several months away, but other publically available data sources can provide a fairly reliable indication of recent trends in irrigation development in the state. The Nebraska Department of Revenue's Property Tax Division, which assembles land class data annually and the Nebraska Department of Natural Resources filings of irrigation well registration are both sources that indicate a similar pattern of continued expansion of significant magnitude.

As indicated in Table 1 (page 3), Nebraska's irrigated acreage on the property tax roles as of 2008 totaled 8.61 million acres (which corresponds closely with 2007 census levels, which would essentially have been collected in that same time frame). Comparing the same data set for 2013, it shows an increase of some 486,000 acres; bringing the Nebraska irrigated acreage to nearly 9.1 million acres – a 5.6 percent increase. As expected, the expanded acreage of irrigated cropland is greatest in the North and the Northeast Agricultural Statistics Districts, where water moratoriums limiting further irrigation development are not presently in place. In both regions, there was a 14 percent growth rate over the past five years.

By county, the largest irrigation acreage expansion since 2008 has occurred in Antelope County, followed closely by Holt County (Table 2, page 3). Both of these counties already had sizable acreage of some 250,000 acres under irrigation in 2008, but are currently

approaching 300,000 acres. Figure 1 (page 4), provides a breakdown of irrigated acreage by county in Nebraska, according to totals for 2013.

When compared with filings of new irrigation well registrations, these numbers of expanded irrigated acres are substantiated. Since the beginning of 2008, there have been 4,075 new irrigation wells registered with the State Department of Natural Resources. Assuming that (1) essentially all the recent wells registered are being used with center pivot distribution systems, and (2) remote sensing analysis in 2005 which indicated the average size of pivot systems to be 115 acres, then the calculated buildup over the past five years would be nearly 469,000 acres – bringing total irrigated acreage to 9.08 million acres. Moreover, the geographic location of recent well registrations across the state correspond closely with the county assessor filings of irrigated acreage increases.

As for what type of land is being developed for irrigation in recent years, the trends tend to vary by region of the state. In the North Agricultural Statistics District, assessor records of both dryland cropland and pasture acreage suggest that the majority of new irrigated crop acreage – about three out of every four acres – was previously pasture land. In the Northeast District, the land class configuration suggests that about half of the new irrigated land was previously dryland cropland and half pasture. For the other areas of the state, new irrigated acreage was essentially all from conversion of dryland cropland.

If the rate of irrigation expansion observed here over the past five years continues, we would see interesting new mile markers down the road (Figure 2). By 2020, half of the state’s cropland base would be under irrigation. And by 2023, just ten years hence, Nebraska’s irrigated acres could reach ten million.

The implications regarding long-term sustainability of our precious water resources are significant. Can we realistically expand irrigation acreage an additional ten percent in the next ten years, and at the same time meet in-stream flow requirements? Will policy limiting pumping rates of existing irrigation wells, already in place across much of western Nebraska, need to be implemented in the eastern areas of the state? And what are the consequences

of possible extended periods of drought across the state that force significant increases in groundwater pumping rates to an ever-increasing cropland acreage dependent on irrigation? Clearly, Nebraskans and our elected officials must continue thoughtful discussion and debate around a common vision of seeing that our water resources are managed for a sustainable future.

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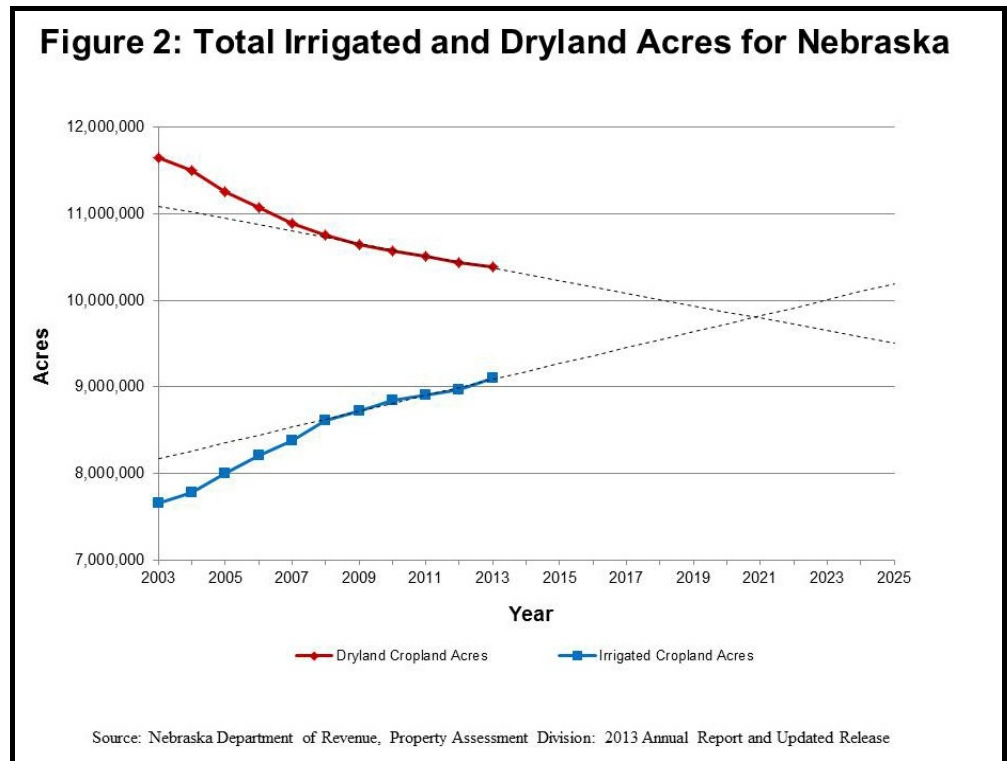


Table 1. Total Irrigated Acres in 2013 for Agricultural Statistics Districts and Nebraska

DISTRICTS	IRRIGATED ACRES		2008-2013 CHANGE IN IRRIGATED	
	2008	2013	Acres	Percent
Northwest	752,954	766,231	13,277	1.8
North	588,261	671,047	82,786	14.1
Northeast	1,062,337	1,208,573	146,236	13.8
Central	1,434,618	1,472,750	38,132	2.7
East	1,712,448	1,805,041	92,593	5.4
Southwest	1,043,125	1,071,341	28,217	2.7
South	1,133,467	1,152,245	18,778	1.7
Southeast	884,118	949,809	65,691	7.4
Nebraska	8,611,329	9,097,038	485,710	5.6

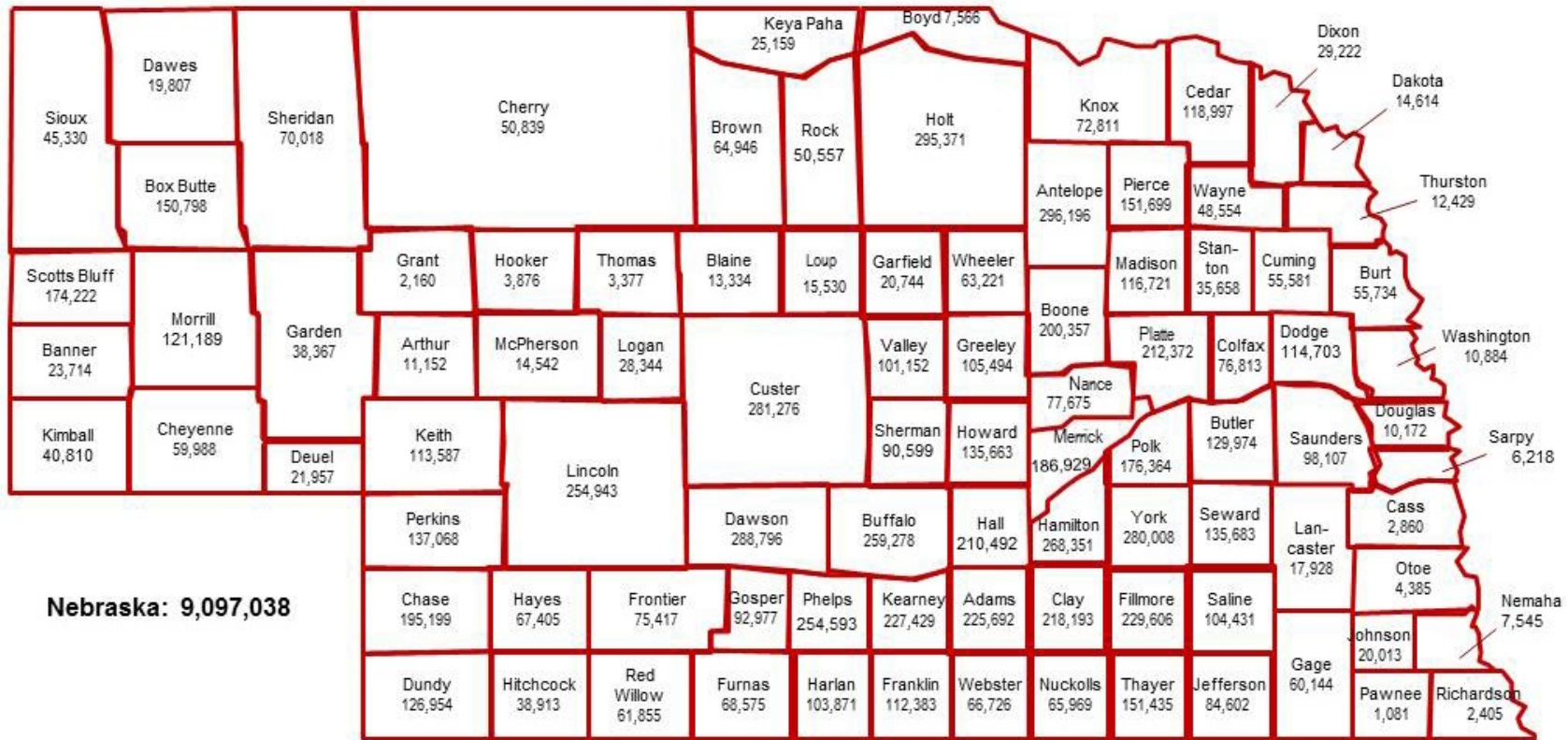
Source: Nebraska Department of Revenue, Property Assessment Division: 2013 Annual Report and Updated Release.

Table 2. Top 20 Nebraska Counties in Terms of 2013 Total Irrigated Acres

COUNTIES	IRRIGATED ACRES		2008-2013 CHANGE IN IRRIGATED	
	2008	2013	Acres	Percent
Antelope	251,864	296,196	44,332	17.6
Holt	255,716	295,371	39,655	15.5
Dawson	278,560	288,796	10,236	3.7
Custer	276,253	281,276	5,023	1.8
York	267,952	280,008	12,056	4.5
Hamilton	264,836	268,351	3,516	1.3
Buffalo	254,992	259,278	4,286	1.7
Lincoln	241,810	254,943	13,133	5.4
Phelps	254,015	254,593	578	0.2
Fillmore	221,894	229,606	7,712	3.5
Kearney	226,182	227,429	1,246	0.6
Adams	221,251	225,692	4,441	2.0
Clay	209,518	218,193	8,675	4.1
Platte	198,865	212,372	13,507	6.8
Hall	208,491	210,492	2,001	1.0
Boone	187,027	200,357	13,330	7.1
Chase	193,389	195,199	1,810	0.9
Merrick	172,088	186,929	14,841	8.6
Polk	170,684	176,364	5,680	3.3
Scotts Bluff	175,155	174,222	-932	-0.5

Source: Nebraska Department of Revenue, Property Assessment Division: 2013 Annual Report and Updated Release.

Figure 1: Total Irrigated Acres by County for 2013 in Nebraska



Source: Nebraska Department of Revenue, Property Assessment Division: 2013 Annual Report and Updated Release

NO NEWSLETTER NEXT WEEK — THANKSGIVING HOLIDAY

