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Nebraska's Virtual Corn Suitability Rating

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Market Report	Yr Ago	4 Wks Ago	6/4/10
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight	$82.25	99.71	$94.78
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	113.77	127.13	125.16
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	100.88	120.22	113.47
Choice Boxed Beef, 600-750 lb. Carcass	141.39	170.71	162.48
Western Corn Belt Base Hog Price Carcass, Negotiated	55.48	85.36	76.19
Feeder Pigs, National Direct 50 lbs, FOB	42.00	*	*
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean	56.46	90.00	86.00
Slaughter Lambs, Ch. & Pr., Heavy, Wooled, South Dakota, Direct	114.25	*	127.00
National Carcass Lamb Cutout, FOB	256.77	301.85	316.22
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	5.95	3.96	3.30
Corn, No. 2, Yellow Omaha, bu.	4.20	3.58	3.25
Soybeans, No. 1, Yellow Omaha, bu.	12.17	9.51	9.49
Grain Sorghum, No. 2, Yellow Dorchester, cwt.	6.86	5.64	5.12
Oats, No. 2, Heavy Minneapolis, MN , bu.	2.61	2.04	1.94
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	*	135.00	150.00
Alfalfa, Large Rounds, Good Platte Valley, ton.	*	92.50	67.50
Grass Hay, Large Rounds, Premium Nebraska, ton.	*	*	*
Dried Distillers Grains, 10% Moisture, Nebraska Average.	148.00	115.00	100.00
Wet Distillers Grains, 65-70% Moisture, Nebraska Average.	51.50	36.00	36.00

***No Market**

Corn Suitability ratings have been used for many years in other parts of the Corn Belt as an agronomic measure of soil productivity, and in turn, some correlation with associated cropland values. For example, in Iowa the Corn Suitability Rating (CSR) is used extensively as a measure of soil productivity across regions and counties, and even down to parcel levels. Google on Iowa CSR, and you will find weighted average CSRs for each county, as well as private firms offering detailed analysis of CSR for any parcel of land in the state. The intent is to provide an index (between 5 and 100) of potential yields for row crop production.

The process makes sense in Iowa, where more than 80 percent of the state's cropland is planted to corn and soybeans every year; with more than 12 million acres in corn, and spread across every part of the state. Consequently, soil and crop scientists have developed a long-term and detailed data base concerning corn yields. In turn, the CSR becomes a useful measure in decisions regarding cash rental rates as well as cropland values.

Nebraska's soils and cropping configurations are considerably more complex and variable than those of Iowa. In addition, irrigation on much of this state's cropland base adds a critical variable to cropland productivity beyond the influence of soils and natural weather conditions. Consequently, we do not have a formal CSR indexing process in place.

However, given some findings from the University of Nebraska-Lincoln's 2010 Nebraska Farm Real Estate Survey, we suspect that land market

participants use an agronomic measure of productivity that can, and often does, get down to some measure of potential corn yield. Since corn is raised on cropland in every part of the state, it may well be a virtual CSR, albeit much less sophisticated than that of our Iowa neighbors.

In the 2010 survey, when survey reporters were asked to provide their estimates of current market value of the various cropland classes in their area, it was followed up with a question asking for them to assign their best estimate of corn yields associated with those particular land classes.

When the reported current average values were divided by the associated corn yield estimates, the land value per bushel provided a measure of corn productivity relative to land value. The results provided some interesting patterns across the state (Table 1 on next page). For example, in the Eastern Region of the state, the correlation centered around $22 per bushel yield for the various land classes. In other words, for every additional ten bushels per acre of average corn yield expected, the market participants appear to be assigning an additional $220 per acre to the land value (10 x $22 = $220). In the Northeast and Southeast Regions, the survey results suggested a correlation of about $18 to $19 per bushel of estimated corn yield. In the Central and South Regions, the relationships were in the $15 to $16 range for the irrigated classes, while somewhat lower for the dryland classes (the lower value for dryland could be reflecting more limited yield potential due to greater and more variable water deficit conditions from year to year). As one might expect, moving to the Western and Northern areas where corn production is somewhat limited by growing degree days as well as soil and water conditions, the relationship of market value to corn yield diminishes – implying that other productivity measures may factor into market measures of productivity more than corn yields. But even in these areas, there are fairly consistent value patterns of $9 to $12 per bushel of expected corn yield.

Certainly, more comprehensive measurement and analysis is needed to identify more definitively the correlations of corn yield expectations to associated Nebraska cropland values. Nevertheless, there does seem to be some general patterns and "rules of thumb" that are operative in today's local land markets across much of the state. Even down to the individual cropland parcel, one might want to consider corn yield potential and use the above averages as at least a starting point for estimating per acre value.

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Table 1. Nebraska Cropland Values Relative to Estimated Productivity (Corn Yield) by Land Class and Agricultural Statistics Districts, 2010

	Land Class		
Region	**Dryland Cropland**	**Irrigated Cropland**	
		Gravity	**Center Pivot**
Northwest:			
$ Value/Acre	490	1,625	1,660
Corn Yield/Acre (Bu.)	56	157	168
$ Value/Bushel	8.75	10.35	9.88
North:			
$ Value/Acre	715	1,800	2,485
Corn Yield/Acre (Bu.)	80	163	192
$ Value/Bushel	8.94	11.04	12.94
Northeast:			
$ Value/Acre	2,735	3,715	4,055
Corn Yield/Acre (Bu.)	144	199	216
$ Value/Bushel	18.99	18.67	18.43
Central:			
$ Value/Acre	1,365	3,155	3,470
Corn Yield/Acre (Bu.)	108	206	212
$ Value/Bushel	12.64	15.32	16.37
East:			
$ Value/Acre	3,330	4,510	4,890
Corn Yield/Acre (Bu.)	145	204	219
$ Value/Bushel	22.97	22.11	22.33
Southwest:			
$ Value/Acre	735	1,785	2,475
Corn Yield/Acre (Bu.)	71	177	197
$ Value/Bushel	10.35	10.08	12.56
South:			
$ Value/Acre	1,380	3,095	3,575
Corn Yield/Acre (Bu.)	117	197	216
$ Value/Bushel	11.79	18.07	16.55
Southeast			
$ Value/Acre	2,410	3,560	4,125
Corn Yield/Acre (Bu.)	127	197	211
$ Value/Bushel	18.98	18.07	19.55
State:			
$ Value/Acre	2,176	3,374	3,763
Corn Yield/Acre (Bu.)	120	197	211
$ Value/Bushel	18.18	17.10	17.87

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