Nebraska Land Values & Cash Rental Rates 2020-2021

Preliminary Estimates

Jim Jansen
Agricultural Economist
jjansen4@unl.edu
402-261-7572

Jeffrey Stokes
Professor in Finance
jeffrey.stokes@unl.edu
402-472-2127
DISCLAIMER

• Land values and rental rates shown and discussed in this presentation are *preliminary estimates* from the UNL Nebraska Farm Real Estate Market Survey.

• Information provided in this presentation are averages from these surveys. Actual land values and rental rates may vary depending upon the quality of the parcel and local market forces for an area.
Nebraska Farm Real Estate Survey

• Annual survey conducted since 1978 of Nebraska agricultural appraisers, professional farm managers, and bankers engaged in the land industry.
  • Preliminary results for land values and rental rates published the second week of March.
  • Full report published in June.
• Nebraska Farm Real Estate website full access to these resources: http://agecon.unl.edu/realestate
Nebraska Agricultural Statistics Districts
Nebraska Land Values
Land Averages and Annual Percent Changes
Nebraska Agricultural Average
All Land Value – Feb. 1, 2021

Northwest $715/ac 4%
North $1,160/ac 6%
Southwest $1,600/ac 3%
Central $3,395/ac 7%
South $3,805/ac 5%
Northeast $5,755/ac 7%
East $6,850/ac 5%
Southeast $5,230/ac 8%
State $2,895/ac 6%

Preliminary Estimates
Nebraska Average Land Value, 1979-2021

Source: a UNL Nebraska Farm Real Estate Market Surveys, 1979 - 2021.
Dryland Cropland (No Irrigation Potential)
Average Value – Feb. 1, 2021

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Value (ac)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>$1,650/ac</td>
<td>9%</td>
</tr>
<tr>
<td>Northwest</td>
<td>$635/ac</td>
<td>4%</td>
</tr>
<tr>
<td>State</td>
<td>$3,380/ac</td>
<td>7%</td>
</tr>
<tr>
<td>Southwest</td>
<td>$1,440/ac</td>
<td>2%</td>
</tr>
<tr>
<td>Central</td>
<td>$3,080/ac</td>
<td>8%</td>
</tr>
<tr>
<td>East</td>
<td>$6,485/ac</td>
<td>6%</td>
</tr>
<tr>
<td>Northeast</td>
<td>$5,765/ac</td>
<td>5%</td>
</tr>
<tr>
<td>South</td>
<td>$3,070/ac</td>
<td>3%</td>
</tr>
<tr>
<td>Southeast</td>
<td>$4,935/ac</td>
<td>11%</td>
</tr>
<tr>
<td>South</td>
<td>$3,070/ac</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Preliminary Estimates*
Dryland Cropland (Irrigation Potential) Average Value – Feb. 1, 2021

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Value (ac)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>$2,115/ac</td>
<td>7%</td>
</tr>
<tr>
<td>Northwest</td>
<td>$760/ac</td>
<td>9%</td>
</tr>
<tr>
<td>Central</td>
<td>$3,575/ac</td>
<td>11%</td>
</tr>
<tr>
<td>Northeast</td>
<td>$6,200/ac</td>
<td>8%</td>
</tr>
<tr>
<td>East</td>
<td>$6,835/ac</td>
<td>4%</td>
</tr>
<tr>
<td>South</td>
<td>$3,605/ac</td>
<td>3%</td>
</tr>
<tr>
<td>Southeast</td>
<td>$5,655/ac</td>
<td>6%</td>
</tr>
<tr>
<td>State</td>
<td>$4,390/ac</td>
<td>6%</td>
</tr>
</tbody>
</table>


Preliminary Estimates
Grazing Land (Tillable)
Average Value – Feb. 1, 2021

Northwest
$540/ac
4%

North
$1,180/ac
7%

Northeast
$3,245/ac
1%

Central
$1,965/ac
5%

East
$3,380/ac
6%

Southwest
$950/ac
3%

South
$1,990/ac
8%

Southeast
$2,985/ac
2%

State
$1,300/ac
5%

Preliminary Estimates
Grazing Land (Nontillable)
Average Value – Feb. 1, 2021

- **Northwest**: $445/ac (3%)
- **North**: $690/ac (5%)
- **Southwest**: $755/ac (1%)
- **Central**: $1,490/ac (2%)
- **South**: $1,465/ac (6%)
- **Southeast**: $2,135/ac (4%)
- **Northeast**: $2,120/ac (4%)
- **East**: $2,575/ac (7%)
- **State**: $860/ac (4%)

*Preliminary Estimates*
Hayland
Average Value – Feb. 1, 2021


Preliminary Estimates
Gravity Irrigated Cropland
Average Value – Feb. 1, 2021

Northwest $2,245/ac 5%
North $3,790/ac 4%
Southwest $3,775/ac 6%
Central $6,180/ac 6%
South $5,735/ac 5%
Southeast $6,710/ac 8%
East $8,110/ac 5%
Northeast $7,325/ac 9%
State $6,095/ac 6%

Center Pivot Irrigated Cropland Average Value – Feb. 1, 2021

Rating of Factors Influencing Agricultural Land Values in 2020

Nebraska Cash Rental Rates

Dryland Cropland Rental Rates
Dryland Cropland
Average Rental Rates – 2021 Season

Northwest: $30/ac, 9%
North: $57/ac, 11%
Southwest: $42/ac, 12%
Central: $98/ac, 8%
South: $83/ac, 10%
Northeast: $225/ac, 5%
East: $220/ac, 7%
Southeast: $170/ac, 3%

Preliminary Estimates
Dryland Cropland
Rental Rate Ranges – 2021 Season

By Region

Northwest
H: $42/ac
A: $30/ac
L: $24/ac

North
H: $91/ac
A: $57/ac
L: $47/ac

Southwest
H: $54/ac
A: $42/ac
L: $35/ac

Central
H: $120/ac
A: $98/ac
L: $89/ac

Northeast
H: $265/ac
A: $225/ac
L: $180/ac

East
H: $240/ac
A: $220/ac
L: $175/ac

South
H: $120/ac
A: $83/ac
L: $57/ac

Southeast
H: $195/ac
A: $170/ac
L: $135/ac

USDA-National Agricultural Statistics Service
Cash Rent Survey

• Biennial survey conducted by the USDA-National Agricultural Statistics Service (NASS) of farmers and ranchers
  • Survey starts in late-winter and conducted through mid-summer of odd-numbered years (some even-number yeas as well)
  • Analysis published around the second week of September
• Nebraska county estimates in addition to other resources may be found at: www.nass.usda.gov/Statistics_by_State/Nebraska/Publications/County_Estimates/
Dryland Cropland Rental Rates – 2020 Season

Source: Farmland Rental Rate Survey, USDA-NASS, August 28, 2020
Nebraska Cash Rental Rates

Irrigated Cropland

Rental Rates
Gravity Irrigated Cropland
Average Rental Rates – 2021 Season

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Rental Rate</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>$180/ac</td>
<td>6%</td>
</tr>
<tr>
<td>Northwest</td>
<td>$115/ac</td>
<td>10%</td>
</tr>
<tr>
<td>Southwest</td>
<td>$170/ac</td>
<td>6%</td>
</tr>
<tr>
<td>Central</td>
<td>$215/ac</td>
<td>5%</td>
</tr>
<tr>
<td>South</td>
<td>$210/ac</td>
<td>2%</td>
</tr>
<tr>
<td>Northeast</td>
<td>$280/ac</td>
<td>8%</td>
</tr>
<tr>
<td>East</td>
<td>$260/ac</td>
<td>2%</td>
</tr>
<tr>
<td>Southeast</td>
<td>$240/ac</td>
<td>4%</td>
</tr>
<tr>
<td>South</td>
<td>$210/ac</td>
<td>2%</td>
</tr>
</tbody>
</table>

Gravity Irrigated Cropland Rental Rate Ranges – 2021 Season

By Region
High Grade (H)  
Average (A)  
Low Grade (L)

Northwest
H: $145/ac  
A: $115/ac  
L: $90/ac

North
H: $210/ac  
A: $180/ac  
L: $140/ac

Northwest
H: $145/ac  
A: $115/ac  
L: $90/ac

Central
H: $255/ac  
A: $215/ac  
L: $175/ac

Southwest
H: $195/ac  
A: $170/ac  
L: $140/ac

South
H: $245/ac  
A: $210/ac  
L: $175/ac

Northeast
H: $320/ac  
A: $280/ac  
L: $225/ac

Southeast
H: $285/ac  
A: $240/ac  
L: $210/ac

East
H: $280/ac  
A: $260/ac  
L: $230/ac

Center Pivot Irrigated Cropland
Average Rental Rates – 2021 Season

Northwest $150/ac 7%
North $210/ac 8%
Southwest $195/ac 5%
Central $235/ac 2%
South $235/ac 7%
Northeast $305/ac 5%
East $290/ac 4%
Southeast $280/ac 6%

Center Pivot Irrigated Cropland Rental Rate Ranges – 2021 Season

Irrigated Cropland Rental Rates – 2020 Season

Source: Farmland Rental Rate Survey, USDA-NASS, August 28, 2020
Nebraska Cash Rental Rates
Pasture and Cow-Calf Pairs
Rental Rates
Pasture per Acre
Average Rental Rates – 2021 Season

Preliminary Estimate
Pasture per Acre
Rental Rate Ranges – 2021 Season

North
H: $41/ac
A: $28/ac
L: $15/ac

Northwest
H: $18/ac
A: $13/ac
L: $11/ac

Southwest
H: $30/ac
A: $22/ac
L: $16/ac

Central
H: $45/ac
A: $37/ac
L: $32/ac

East
H: $72/ac
A: $53/ac
L: $40/ac

Northeast
H: $84/ac
A: $66/ac
L: $49/ac

South
H: $46/ac
A: $38/ac
L: $28/ac

Southeast
H: $59/ac
A: $49/ac
L: $40/ac

By Region
High Grade (H)
Average (A)
Low Grade (L)

Pasture per Acre
Rental Rates – 2020 Season

Source: Farmland Rental Rate Survey, USDA-NASS, August 28, 2020
Cow-Calf Pairs
Average Rental Rates – 2021 Monthly

Northwest
$39.60/pair
4%

North
$63.15/pair
3%

Northeast
$60.75/pair
5%

Southwest
$51.60/pair
3%

Central
$58.85/pair
8%

East
$55.20/pair
7%

South
$49.80/pair
6%

Southeast
$54.80/pair
9%

Preliminary Estimates
Cow-Calf Pairs
Rental Rate Ranges – 2021 Monthly

By Region
High Grade (H)
Average (A)
Low Grade (L)

Northwest
H: $48.75/pair
A: $39.60/pair
L: $32.90/pair

North
H: $69.45/pair
A: $63.15/pair
L: $52.70/pair

Northeast
H: $72.10/pair
A: $60.75/pair
L: $47.85/pair

Southwest
H: $59.70/pair
A: $51.60/pair
L: $43.35/pair

Central
H: $68.70/pair
A: $58.85/pair
L: $42.15/pair

East
H: $65.90/pair
A: $55.20/pair
L: $45.50/pair

South
H: $61.20/pair
A: $49.80/pair
L: $39.80/pair

Southeast
H: $64.20/pair
A: $54.80/pair
L: $38.45/pair

Source: Nebraska Farm Real Estate Market Development Survey, 2021. *Preliminary Estimates*
Agricultural Land Leases
Trends in Lease Arrangements for 2021
Methods for Setting Cash Rental Rates

• Methods for estimating a cash rental rate in 2021:
  • Adjusting survey data
  • Cash equivalent from crop share
  • Return on investment
Estimating Cash Rental Rates by Adjusting Survey Data

• Land rental rate survey data:
  • Evaluate available cash rental survey data to establish a baseline in the landlord and tenant negotiation process.

• Average yields:

<table>
<thead>
<tr>
<th>County</th>
<th>Value</th>
<th>Farm</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Rental Rate</td>
<td>$135/ac.</td>
<td>County Rent/Bushel</td>
<td>$1.13/bu.</td>
</tr>
<tr>
<td>Corn Yield</td>
<td>120 bu./ac.</td>
<td>APH Yield</td>
<td>x 105 bu./ac.</td>
</tr>
<tr>
<td>County Rent/Bushel</td>
<td>$1.13/bu.</td>
<td>Farm Level Rent</td>
<td>$118.13/ac.</td>
</tr>
</tbody>
</table>
Cash Equivalent From Crop Share

• Rent paid to landlord by tenant based off owner’s share of net returns per acre.
  • Example 50/50 split:

<table>
<thead>
<tr>
<th>Value</th>
<th>Corn - March 2020</th>
<th>Corn - July 2020</th>
<th>Corn - Nov. 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield (50% share)</td>
<td>80 bu./ac.</td>
<td>80 bu./ac.</td>
<td>80 bu./ac.</td>
</tr>
<tr>
<td>Price/bushel</td>
<td>x $3.50/bu.</td>
<td>x $3.10/bu.</td>
<td>x $3.90/bu.</td>
</tr>
<tr>
<td>Income</td>
<td>$280/ac.</td>
<td>$248/ac.</td>
<td>$312/ac.</td>
</tr>
<tr>
<td>Net Return to Owner</td>
<td>$125/ac.</td>
<td>$93/ac.</td>
<td>$157/ac.</td>
</tr>
<tr>
<td>(Effective Rent)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cash Equivalent From Hay Share

- Rent paid to landlord by tenant based off owner’s share of net returns per acre.
  - Example 33/67 & 50/50 split:

<table>
<thead>
<tr>
<th>Value</th>
<th>33:67 Hayland Share</th>
<th>50:50 Hayland Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield (share)</td>
<td>0.83 ton/ac.</td>
<td>1.25 tons/ac.</td>
</tr>
<tr>
<td>Price/ton</td>
<td>x $80/ton</td>
<td>x $80/ton</td>
</tr>
<tr>
<td>Income</td>
<td>$66/ac.</td>
<td>$100/ac.</td>
</tr>
<tr>
<td>Owner Expenses*</td>
<td>-$0/ac.</td>
<td>-$10/ac.</td>
</tr>
<tr>
<td>Net Return to Owner</td>
<td>$66/ac.</td>
<td>$90/ac.</td>
</tr>
<tr>
<td>(Effective Rent)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*In this example, the owner does not pay any expenses for the 33/67 hay share. Also, the owner pays $10 per acre in fertilizer expense for the 50/50 hay share.
Return on Investment

• Multiply the estimated current market value by the expected rate of return to determine the rental rate per acre.

<table>
<thead>
<tr>
<th>Farm</th>
<th>Dryland Cropland</th>
<th>Irrigated Cropland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land Value</td>
<td>$5,000/ac.</td>
<td>$8,500/ac.</td>
</tr>
<tr>
<td>Rate of Return</td>
<td>x 2.4-2.8%</td>
<td>x 2.5-2.9%</td>
</tr>
<tr>
<td>Rental Rate per Acre</td>
<td>$120-$140/ac.</td>
<td>$213-$247/ac.</td>
</tr>
</tbody>
</table>

*Estimated net rates of return by land type are available in Table 5 of the Nebraska Farm Real Estate Market Highlights Report 2019-2020.
Entity Responsible for Maintaining Irrigation System as Part of Cash Lease in Nebraska

Discount on Cash Rent per Acre When Tenant Owns Pivot for Irrigation System in Nebraska

Discount on Cash Rent per Acre When Tenant Owns Power Unit for Irrigation System in Nebraska

<table>
<thead>
<tr>
<th>Power Unit</th>
<th>Discount per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>Percent of Respondents</td>
</tr>
<tr>
<td>System Type</td>
<td></td>
</tr>
<tr>
<td>Diesel Engine</td>
<td>23</td>
</tr>
<tr>
<td>Propane or Natural Gas Engine</td>
<td>23</td>
</tr>
<tr>
<td>Electric Motor</td>
<td>20</td>
</tr>
</tbody>
</table>

Survey Response on Whether 2019 Land Leases Contained Provisions to Account for Damages from Flooding

Adjustments Made to Cash Rent on Cropland Having Extensive Prevented Plant for 2019

<table>
<thead>
<tr>
<th>Adjustment to Cash Rent</th>
<th>Response Rate Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Adjustments</td>
<td>36.4</td>
</tr>
<tr>
<td>Reduced Rent</td>
<td>39.1</td>
</tr>
<tr>
<td>No Rent</td>
<td>10.3</td>
</tr>
<tr>
<td>Other</td>
<td>14.2</td>
</tr>
</tbody>
</table>

Survey Response on Whether 2020 Lease Provisions Were Added or Revised to Account for Flooding

Questions?

Jim Jansen
Agricultural Economist
jjansen4@unl.edu
402-261-7572