



Natural Resources Conservation Service  
U.S. DEPARTMENT OF AGRICULTURE

# ROI Analysis for a Permanent Wetland Easement

A Financial and Environmental Evaluation



FARM PRODUCTION AND CONSERVATION  
FSA | NRCS | RMA | Business Center

# UNL Extension

- The Nebraska Agricultural Budget Calculator created by UNL provides both a cash cost per unit of production and a total cost of production or economic cost per unit for each crop.

Region	Detail Bt, ECB, RW, & RIB		Water Source	Pivot Irrigated Diesel							
Tillage System	Conventional Tillage		Yield 235 bushel	acre/inches 13							
Cropping System	Continuous		235 bushel	Follows Leasume? No							
Crop Insurance	36-Corn	14	0								
<b>36-Corn, Bt, ECB, RW, &amp; RIB, Conventional Tillage, Continuous, 235 bushel Yield, Pivot Irrigated Diesel</b>											
<b>2024 Budget 36-Corn, Bt, ECB, RW, &amp; RIB, Conventional Tillage, Continuous, 235 bushel Yield</b>											
<b>Pivot Irrigated Diesel, 800 GPM 35 PSI, 13 acre/inches</b>											
Field Operations	Times or Qty	Unit	Labor @ \$20.00/Hr	Fuel @ \$3.45 and Lube	Repairs Power	Repairs Tonn	Ownership* Power	Ownership* Tonn	Total	Your Estimate	
1 Disk	0		0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2 Field Cultivation	1		1.47	2.17	0.21	2.45	9.05	2.78	18.13		
3 Spray Herbicide	1		0.76	0.32	0.02	1.11	1.59	2.02	5.82		
4 Plant	1		2.40	1.08	0.06	6.56	5.24	9.12	24.46		
5 Row Crop Cultivation	1		2.00	1.26	0.06	1.12	4.77	3.84	13.05		
6 Row Crop Cultivation	0.25		0.50	0.32	0.01	0.28	1.19	0.96	3.26		
7 Spray Insecticide	Custom										
8 Spray Fungicide	Custom										
9 Pivot D 125' Lift w/fertigation	13	ai	12.04	95.70	5.10	8.00	9.68	20.57	151.09		
10 Combine In Corn (corn head)	220		3.90	7.39	7.82	1.77	35.90	12.26	69.04		
11 Cart	235	bu	1.57	0.85	0.05	1.28	3.73	2.55	10.03		
12 Truck	Custom										
13 Dry Grain	Custom										
<b>Total for Field Operations:</b>			<b>24.64</b>	<b>109.09</b>	<b>13.33</b>	<b>22.57</b>	<b>71.15</b>	<b>54.10</b>	<b>294.88</b>		
Materials & Services	Operation Index	Percent Acres Applied	Application Rate	Unit	Applied Price	Total	Your Estimate				
Balance Flex	Herbicide	3	100%	4 ounce	6.00	24.00					
Bicap II Magnum	Herbicide	3	100%	2.1 quart	17.50	36.75					
Corn Bt, ECB, RW, & RIB	Seed	4	100%	32.6 k/s seed	4.13	134.48	110				
10-34-0	Fertilizer	4	100%	6 gallon	3.30	19.80					
32-0-0 (Applied by R2)	Fertilizer	9	100%	205 lbs N	0.60	123.00					
Spray	Custom	7	30%	1 acre	9.00	2.70					
* Brigade 2EC	Insecticide	7	10%	5.12 ounce	1.48	0.76					
* Mustang Maxx	Insecticide	7	20%	3 ounce	1.88	1.13					
Spray	Custom	8	30%	1 acre	9.00	2.70					
Revvytek	Fungicide	8	30%	8 ounce	3.67	8.81					
Haul Grain Bushels	Custom	12	100%	235 bushel	0.15	35.25					
Dry 2 Points Removed	Custom	13	20%	235 bushel	0.10	4.70					
Scouting Irrigated Corn	Scouting		100%	1 acre	13.00	13.00					
	Crop Insurance				14.00	14.00					
<b>Total Materials &amp; Services:</b>							<b>421.08</b>				
*Insecticide for Spider mites and Western Bean Cutworm respectively.											
<b>Total listed costs for Field Operations and Materials and Services</b>							<b>715.96</b>				
Interest on Operations Capital \$ 590.71			cash expense @		7.00% for 60mo		20.67				
<b>Total Operating and Use Related Ownership Costs:</b>							<b>736.63</b>				
Overhead (accounting, liability insurance, vehicle cost, office expense, soil tests)											
Real Estate Opportunity*							Pivot (State)		\$ 8.760	per acre @ 3.00%	262.80
Real Estate Taxes							\$ 8.760		per acre @ 1.25%	109.50	
<b>Total Cost per Acre Including Overhead</b>							<b>1,141.93</b>				
<b>Cash Cost per bushel</b>							*Ownership and RE Opportunity not included in cash costs				
<b>Cost of production per bushel</b>							<b>4.86</b>				
Use the UNL Ag Budget Calculator program to customize crop budgets at: <a href="http://agbudget.unl.edu">agbudget.unl.edu</a>											

# Introduction to the Easements

- Overview Of Easements
  - Landowner 1 Easement: 13.28 acres enrolled in 2021
  - Landowner 2 Easement: 38.42 acres enrolled in 2021

## Financial Overview (Pre-Easement Costs & Revenue)

- Landowner 1 Annual Operation Cost: \$41,072
- Landowner 1 Annual Revenue: \$54,279
- Landowner 2 Annual Operation Cost: \$72,513
- Landowner 2 Annual Revenue: \$108,125



# Financial Overview (Pre-Easement Costs)

Landowner 1	2017	2018	2019	2020	2021	2022	2023
	corn	soybeans	corn	corn	soybeans	corn	corn
Rolling Stalk Chopping	9	9		9	12		12
Disking					21		
Fertilizing	8		8	10		10	10
Fertilizer	110		97	105		147	184
Planting	18	18	18	18	20	20	20
Seed	85.38	62.2	98.07	103	73.95	107.69	118.46
Spraying	98	92	108	104	162	103.91	85.62
Cultivating	10	10	10	12	12	15	15
Hilling	10	10	10	12	12	15	15
Harvesting	40	40	45	45	45	45	45
Crop Insurance			55	56	50	117	102
Irrigation	43.58	41.78	37.5	67.47	51.88	61.97	65.06
Taxes	89.06	84.39	78.81	70.44	70.64	69.98	66.98
Imput Subtotal per/ac	521.02	367.37	565.38	611.91	530.47	712.55	739.12
Labor	2340	2340	2340	2340	360	360	360
Acres	75	75	75	75	60	60	60
<b>Totals</b>	<b>41416.5</b>	<b>29892.75</b>	<b>44743.5</b>	<b>48233.25</b>	<b>32188.2</b>	<b>43113</b>	<b>44707.2</b>

# Financial Overview (Pre-Easement Costs)

Landowner 2	2017	2018	2019	2020	2021	2022	2023
	corn	soybeans	corn	corn	soybeans	corn	corn
Rolling Stalk Chopping	9	9		9	12		12
Disking					21		
Fertilizing	8		8	10		10	10
Fertilizer	110		97	105		147	184
Planting	18	18	18	18	20	20	20
Seed	85.38	62.2	98.07	103	73.95	107.69	118.46
Spraying	98	92	108	104	162	103.91	85.62
Cultivating	10	10	10	12	12	15	15
Harvesting	40	40	45	45	45	45	45
Crop Insurance			55	56	50	117	102
Irrigation	27.55	26.39	20.96	29.1	34.54	39.04	44.68
Pit Pump Diesel	9.14	8.77	9.5	7.47	0	0	0
Taxes	92.86	90.86	86.11	81.01	73.39	74.71	75.81
Input Subtotal per/ac	507.93	357.22	555.64	579.58	503.88	679.35	712.57
Acres	145	145	145	145	110	110	110
<b>Totals</b>	<b>73649.85</b>	<b>51796.9</b>	<b>80567.8</b>	<b>84039.1</b>	<b>55426.8</b>	<b>74728.5</b>	<b>78382.7</b>

# Landowner 1 Yields

Corn Price per bu	\$	4.32								
Soybeans price per bu	\$	10.06								
Easement Payment	\$	57,635.00								
		2015	2016	2017	2018	2019	2020	2021	2022	2023
Bushels of Corn				15848		12219	15940		15600	15645
Bushels of Soybeans			2774		5306			4305		
<b>Total Corn Revenue before 2021</b>	\$	190,110.24								
<b>Total Corn Revenue after 2021</b>	\$	134,978.40								
<b>Total Soybean Revenue before 2021</b>	\$	81,284.80								
<b>Total Soybean Revenue after 2021</b>	\$	43,308.30								
<b>Grazing(\$)</b>		833.6125								

# Landowner 2 Yields

Corn Price per bu	\$	4.32								
Soybeans price per bu	\$	10.06								
Easement payment	\$	143,118.00								
NE Average Farmland Value (per ac)	\$	4,015.00								
		2015	2016	2017	2018	2019	2020	2021	2022	2023
Bushels of Corn			32380	33215		18216	24703		24656	26361
Bushels of Soybeans		991			9439	7460		7531		
<b>Total Corn Revenue before 2021</b>	\$	468,780.48								
<b>Total Corn Revenue after 2021</b>	\$	220,393.44								
<b>Total Soybean Revenue before 2021</b>	\$	179,973.40								
<b>Total Soybean Revenue after 2021</b>	\$	75,761.86								
<b>Grazing(\$)</b>	\$	3,096.28								



# Financial Overview (Post-Easement Annual Costs & Revenue)

- Landowner 1 Operation Cost: \$42,565
- Landowner 1 Revenue: \$60,263
  
- Landowner 2 Operation Cost: \$69,995
- Landowner 2 Revenue: \$101,815

**Budget Table:**

Description	Landowner +	DU *	CPNRD ^	Precision Agronomy Solutions® ^^	NRCS ^^^	Total
Pipeline from Well to Pivot Point (\$7.35/ft @ 1,500 ft)	\$4,360.00	\$1,665.00	\$5,000.00	\$0.00	\$0.00	<b>\$11,025.00</b>
New Sprinkler System	\$25,168.06	\$24,661.00	\$0.00	\$0.00	\$0.00	<b>\$49,829.06</b>
Convert Gravity Flow Well to Pivot Well	\$8,550.00	\$10,959.00	\$0.00	\$0.00	\$0.00	<b>\$19,509.00</b>
Flowmeter	\$437.50	\$263.75	\$701.25	\$0.00	\$0.00	<b>\$1,402.50</b>
Irrigation Prescriptions	\$1,267.50	\$3,053.50	\$0.00	\$845.00	\$3,284.00	<b>\$8,450.00</b>
<b>Total</b>	<b>\$39,783.06</b>	<b>\$40,602.25</b>	<b>\$5,701.25</b>	<b>\$845.00</b>	<b>\$3,284.00</b>	<b>\$90,215.56</b>

# Environmental and Social Benefits

- Non-Quantified Benefits:
  - Flood reduction
  - Groundwater Recharge
  - Water Quality Improvement
  - Cost-Share
    - New Pivot & Pivot Upgrades
    - Pivot Crossing Ramp
    - Fireflies
  - Ease of Maintenance
  - Biodiversity



# ROI Results - Landowner 1

- ROI: 34%
- Annual Profit Before Easement: \$13,207
- Annual Profit After Easement: \$17,697
- Increase in Annual Profit: \$4,490
- One-Time Easement Payment: \$57,635
- ROI indicates that the operation became more profitable after becoming an Easement holder.

# ROI Results - Landowner 2

- ROI: 15%
- Annual Profit Before Easement: \$35,612
- Annual Profit After Easement: \$41,130
- Annual Increase in Profit: \$5,518
- One-Time Easement Payment: \$143,118
- ROI indicates that the operation became more profitable and reduced overall cost.

# Combined ROI For Both Easements

- Wetlands Don't care about property lines
  - Combined ROI: 20%
  - Profit Increase: About \$10,000

	Operation Cost Before 2021	Profit Before 2021	Operation Cost After 2021	Profit After 2021	ROI (Return on investment)
Landowner 1	\$ 41,071.50	\$ 13,207.51	\$ 42,565.52	\$ 17,696.99	34%
Landowner 2	\$ 72,513.41	\$ 35,612.23	\$ 69,994.59	\$ 41,130.15	15%
<b>Total</b>	<b>\$ 113,584.91</b>	<b>\$ 48,819.74</b>	<b>\$ 112,560.11</b>	<b>\$ 58,827.14</b>	<b>20%</b>

# Conclusion

- While easements are primarily for conservation, they can also lead to financial benefits for landowners, as shown by the ROI analysis.
- Operational cost savings, new revenue streams, improved efficiency, and reductions in risks during flooding events make easements a viable investment opportunity.



# Questions?