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Glennis McClure

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Cornhusker Economics

Significant Changes in Cost of Production for 2022 Crops

For the 2022 crop production year, eighty-four [Nebraska crop budgets](#), including two cover crops and a pasture budget, were prepared by crop specialists and extension economists at the University of Nebraska - Lincoln. The 2022 crop budget information is provided in three formats including the new report format from the Center's new Agricultural Budget Calculator (ABC). Excel and printable pdf file versions are available as well.

Cost of Production Projected Higher

Higher fuel, fertilizer and pesticide costs are the main drivers of projected production cost increases for crops produced in 2022. Higher machinery and land costs are factors adding to cost increases as well.

Table 1 provides a comparison of each corn budget showing 2021 costs per bushel on a cash and economic basis compared to the 2022 projected costs. For dryland corn, considering the 150-yield average for all dryland budgets, cash costs per bushel increased \$0.53 and \$0.56 for the economic costs. For the irrigated corn budgets, using a 239-bushel yield on average, 2022 cash costs were projected to increase by \$0.55 per bushel and \$0.59 per bushel for economic costs. Table 2 provides a similar comparison of the 2021 cost of production figures on soybeans with the 2022 projected costs of three dryland soybean budgets indicating a cash cost increase of \$0.93 per bushel and \$1.02 per bushel for economic costs. Irrigated soybean cost per bushel increases were similar at \$0.91 (cash) and \$1.11

(economic) per bushel. Table 3 provides cash and economic cost per bushel comparisons for 2021 and 2022 wheat budgets with a range from \$1.09 to \$1.19 per bushel increases in cash and economic cost of production estimates.

In addition to corn, soybeans and wheat, crop budgets included in the report for 2022 are alfalfa, dry edible beans, grain sorghum, grass hay, millet, peas, oats, sugar beets, and sunflowers. The 2022 Nebraska crop budgets are based on a projected yield which is used to calculate both a total economic and a cash cost per unit of production. Cash costs do not include the ownership cost of machinery and equipment used in field operations and a real estate opportunity cost when land is owned. On the other hand, economic costs include an opportunity cost of land and equipment, plus depreciation costs of machinery and equipment.

Land values from the [2021 Nebraska Farm Real Estate Report](#) are used in the budgets in calculating land ownership /opportunity costs. Land values increased overall including 6.5% for dryland (State), 5.5% for dryland (Eastern, NE) and 8% for statewide irrigated land values. Additional increases in land values and rental rates would factor into an even higher cost of production in some locations than what the 2022 crop budgets may indicate.

If an operator rents crop ground and is calculating their cost of production, the land value and real estate taxes in our sample budgets can be eliminated and replaced by

the amount paid for cash rent. In this scenario, cash costs will increase due to the added cash rent expenses and the removal of cash real estate taxes. Economic costs will change as the opportunity cost of land ownership figured in the Nebraska crop budgets is a non-cash expense and is included in economic costs.

In addition to depreciation and ownership costs of machinery and equipment, field operation costs include labor, fuel, and repair expenses. Repairs and depreciation expenses are figured using the Society of Agricultural Engineers formulas and equations for power units and implements. The 2022 labor rate remained the same as last year's figure of \$25 per hour. Labor costs for each operation are calculated using machinery accomplishment rates and are adjusted for the additional time required for getting machinery ready, adjusting machinery, and handling fertilizer and crop inputs.

Budgets Should be Modified Based on Operations and Input Price Changes

Prices for materials and services for the 2022 crop budgets were obtained in the August to October 2021 timeframe. Since then, price changes on crop production inputs, fuel, and in some cases labor and equipment cost increases have occurred. As of mid-January 2022, fertilizer has been the leader in price increases ranging from approximately 35 – 40% for 10-34-0 and 32-0-0 to 70% or more on anhydrous. While in some cases prices may have dropped from what was estimated in the fall, some pesticide price increases ranging from 16 to 60% have been observed. As producers and farm managers utilize the Nebraska crop budgets, modifying prices and input costs should be done for individual operations, depending on what their suppliers are offering. Modifying or customizing the crop budgets for individual use is possible in the formats in which they are created (Excel or now in the new Ag Budget Calculator program).

During 2021, fuel and oil prices nearly doubled, therefore those cost increases are reflected in the 2022 crop budgets. As the country was recovering from the Covid-19 pandemic-related shutdowns, the diesel price was up significantly by the fall of 2021 to approximately \$2.82 per gallon from \$1.50 per gallon used in the 2021 crop budgets. Fuel costs per acre are calculated using machinery accomplishment rates as well as estimated fuel consump-

tion rates. With the significant increase in fuel and oil prices, coupled with supply chain issues for materials, fertilizer and many pesticide products increased in price. Therefore, materials and services per acre cost increases are reflected in the budgets.

Three examples of Nebraska crop budgets showing per acre cost comparison breakdowns for 2020, 2021, and 2022 are included below. Chart 1 is a dryland corn budget example where fluctuations in costs occurred. Fertilizer dipped in per acre cost in 2021, then back up significantly in 2022 with all other cost categories showing increases over the two years. Chart 2 shows an irrigated corn budget where there was a softening of costs from 2020 to 2021, then back up significantly in 2022, mainly due to fertilizer costs per acre projected to more than double. Dryland soybeans is the crop budget example shown in Chart 3. Similar to the two corn budgets, the soybean cost comparison per acre is up in 2022, especially in the pesticide cost category. Total materials and services per acre cost increases for 2022 stand out in all three charts.

The 2022 Nebraska crop budgets were created using assumptions thought to be valid for many producers in Nebraska; however, each farming operation is unique. The budgets are published as a guide and should be examined carefully and modified as needed prior to being used for decision-making by individual producers.

2022 Crop Budget Reports Available from the Agricultural Budget Calculator

The free online [Ag Budget Calculator \(ABC\)](#) allows ag producers and managers access to create their own budgets or download the UNL crop budgets in the program that may fit most closely with their cropping practices. The program allows users to make modifications to customize the budgets as their own or users can start from scratch and make their own budgets entirely.

The ABC Program features include:

- Cash and Economic Budget Reports with per acre and per unit cost information
- Net Return projections
- Field Operation cost reports
- Material and Services cost reports
- Projected Revenue section with estimated net returns reported

- Whole Farm component to reconcile direct and overhead expenses along with the ability to combine enterprises into budget reports
- Analysis section with breakeven, sensitivity, and a risk module with calculations to view disaster scenarios with crop insurance options

Plans are to continue to enhance the program with more analysis features, a cash flow report, and a livestock production cost module.

The cap.unl.edu/abc website provides more information

and includes the link to access the free program and create a user account or you can go directly to agbudget.unl.edu to begin using the program.

Resources:

Klein, R., McClure, G., 2022 Nebraska Crop Budgets, University of Nebraska – Lincoln, cap.unl.edu/cropbudgets

Jansen, J., Stokes, J., Nebraska Farm Real Estate Report 2021 Final Results. University of Nebraska – Lincoln, cap.unl.edu/realestate

Table 1: Cash & Economic Cost Summary of 2021 & 2022 Nebraska Dryland Corn Budgets

	Dryland Corn Budgets (11 Total)	Yield Est.	2021 Cash Cost /bu	2022 Cash Cost /bu	2021 Economic Cost /bu	2022 Economic Cost/bu
**Budget #						
15	Conv Till, Continuous	100	\$3.04	\$3.58	\$4.51	\$5.14
16	Conv Till, Corn / SB Rotation	110	\$2.53	\$2.98	\$3.81	\$4.30
17	Conv Till, Continuous (Eastern)	160	\$2.31	\$2.75	\$3.77	\$4.27
18	Conv Till, Corn / SB Rotation (Eastern)	170	\$2.03	\$2.36	\$3.37	\$3.73
19	No Till, Continuous	135	\$2.46	\$3.10	\$3.43	\$4.10
20	No Till, Continuous (Eastern)	180	\$2.21	\$2.76	\$3.44	\$4.03
21	No Till, Continuous	140	\$2.43	\$3.05	\$3.36	\$4.02
22	No Till, Continuous (Eastern)	185	\$2.16	\$2.72	\$3.36	\$3.96
23	No Till, after Beans	145	\$2.28	\$2.75	\$3.19	\$3.69
24	No Till, after Beans (Eastern)	195	\$1.98	\$2.39	\$3.12	\$3.58
25	Ecofallow follows Wheat (Southwest)	130	\$2.36	\$3.09	\$3.01	\$3.70
	Dryland Average Cost per bushel	150	\$2.34	\$2.87	\$3.49	\$4.05

	Irrigated Corn Budgets (15 Total)	Yield Est.	2021 Cash Cost /bu	2022 Cash Cost /bu	2021 Economic Cost /bu	2022 Economic Cost/bu
Budget #						
26	Ridge Till, Continuous	245	\$2.18	\$2.70	\$3.15	\$3.70
27	Ridge Till, after Beans	255	\$2.01	\$2.48	\$2.93	\$3.42
28	Ridge Till, Continuous	250	\$2.21	\$2.78	\$3.18	\$3.77
29	Conv Till, Continuous (Panhandle)	175	\$2.55	\$3.08	\$3.27	\$3.87
30	No Till, Continuous	245	\$2.19	\$2.81	\$3.15	\$3.82
31	No Till, Continuous	250	\$2.15	\$2.78	\$3.09	\$3.77
32	Strip Till, Continuous	260	--	\$2.69	--	\$3.74
33	No Till, after Beans	275	\$1.94	\$2.58	\$2.80	\$3.48
34	No Till, after Beans	275	\$1.99	\$2.56	\$2.85	\$3.46
35	No Till, after Beans	275	\$1.99	\$2.53	\$2.86	\$3.43
36	Conv Till, Continuous	235	\$2.37	\$2.95	\$3.46	\$4.10
37	Conv Till, after Beans	245	\$2.16	\$2.65	\$3.18	\$3.75
38	Conv Till, Continuous (Panhandle)	175	\$2.99	\$3.52	\$3.80	\$4.36
39	Conv Till, after Beans (Panhandle)	185	\$2.76	\$3.23	\$3.50	\$3.96
40	Conv Till, Continuous	240	\$2.47	\$3.05	\$3.53	\$4.18
	Irrigated Average Cost per bushel	239	\$2.28	\$2.83	\$3.20	\$3.79

Statewide land values used unless indicated

**Budget numbers shown are for 2022 (some changed by one from 2021) with the addition of a corn budget.

Table 2: Cash & Economic Cost Summary of 2021 & 2022 Nebraska Soybean Budgets

	Soybean Budgets (10 Total)	Yield Est.	2021 Cash Cost /bu	2022 Cash Cost /bu	2021 Economic Cost /bu	2022 Economic Cost/bu
*Budget #	Dryland					
58	Conv Till after Corn	45	\$5.63	\$6.37	\$8.64	\$9.51
59	No-till after Corn	50	\$5.66	\$6.71	\$8.21	\$9.32
60	No-till Continuous	45	\$5.30	\$6.31	\$8.08	\$9.15
	Dryland Average Cost per bushel	47	\$5.53	\$6.46	\$8.31	\$9.33
Budget #	Irrigated					
61	Conv Till after Corn	67	\$5.32	\$6.20	\$8.91	\$10.00
62	Ridge Till after Corn	70	\$4.78	\$5.69	\$7.91	\$8.95
63	No-till, Narrow Row after Corn	75	\$4.69	\$5.62	\$7.64	\$8.75
64	No-till, Narrow Row continuous	64	\$4.89	\$6.11	\$8.35	\$9.78
65	No-till Drilled after Corn - Liberty Link	78	\$4.18	\$4.97	\$7.00	\$8.01
66	No-till Drilled after Corn - Enlist	78	\$4.34	\$5.15	\$7.16	\$8.19
67	No-till Drilled after Corn - RR 2 Xtend	78	\$4.28	\$5.14	\$7.11	\$8.18
	Irrigated Average Cost per bushel	73	\$4.64	\$5.55	\$7.73	\$8.84

All soybean budgets utilize state real estate values.

*Budget numbers shown are for 2022 (changed by one from 2021) with the addition of a corn budget.

Table 3: Cash & Economic Cost Summary of 2021 & 2022 Nebraska Wheat Budgets

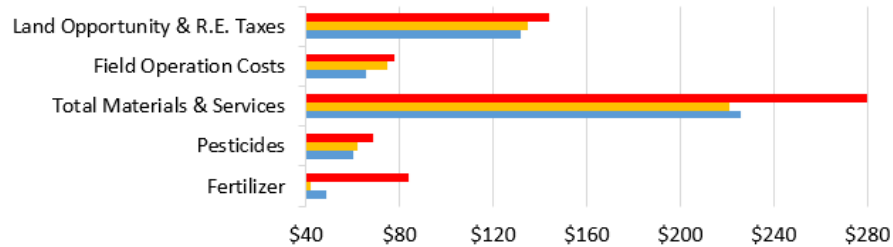
	Wheat Budgets (8 Total)	Yield Est.	2021 Cash Cost /bu	2022 Cash Cost /bu	2021 Economic Cost /bu	2022 Economic Cost/bu
*Budget #	Dryland					
75	*Spring Wheat , No-till after Row Crop (Southwest)	40	\$4.25	\$5.45	\$6.00	\$7.19
76	No-till after Row Crop (Southwest)	55	\$3.15	\$4.18	\$4.42	\$5.44
77	No-till, Fallow, 1 crop in 2 years (Panhandle)	70	\$3.21	\$4.73	\$4.90	\$6.39
78	Stubble Much Fallow, 1 crop in 2 years (Panhandle)	65	\$3.25	\$4.21	\$5.32	\$6.35
79	Conv. Till, 1 crop in 2 years (Panhandle)	60	\$3.42	\$4.38	\$5.58	\$6.52
80	No-till, before Corn, 2 crops in 3 years (Southwest)	80	\$2.87	\$4.32	\$4.16	\$5.60
	Dryland Average Cost per bushel	62	\$3.36	\$4.55	\$5.06	\$6.25
Budget #	Irrigated					
81	No-till after Dry Beans (Panhandle)	105	\$2.66	\$3.73	\$3.66	\$4.80
82	No-till, in Rotation (Panhandle)	90	\$3.55	\$4.67	\$4.74	\$5.95
	Irrigated Average Cost per bushel	98	\$3.11	\$4.20	\$4.20	\$5.38

*Budget #75 is a Spring Wheat budget, others are Winter Wheat (#75 in 2022).

Budget numbers changed by one in 2022 due to the addition of a corn budget.

Chart 1

Dryland Corn #23 Budget
Per Acre Cost Comparison 2020 to 2022

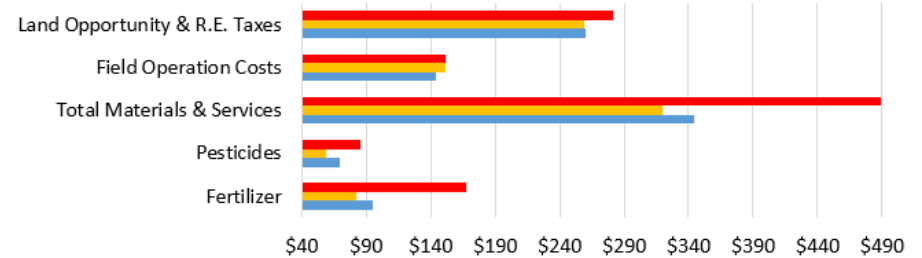


	Fertilizer	Pesticides	Total Materials & Services	Field Operation Costs	Land Opportunity & R.E. Taxes
■ 2022	\$84	\$69	\$280	\$78	\$144
■ 2021	\$42	\$62	\$221	\$75	\$135
■ 2020	\$49	\$60	\$226	\$66	\$132

■ 2022 ■ 2021 ■ 2020

Chart 2

Irrigated Corn #32(33) Budget
Per Acre Cost Comparison 2020 to 2022

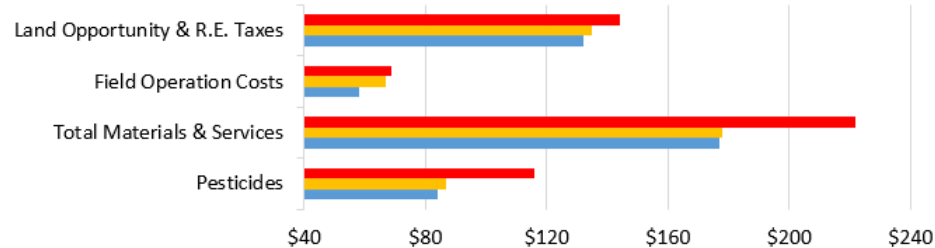


	Fertilizer	Pesticides	Total Materials & Services	Field Operation Costs	Land Opportunity & R.E. Taxes
■ 2022	\$167	\$86	\$489	\$152	\$281
■ 2021	\$82	\$59	\$320	\$152	\$259
■ 2020	\$95	\$70	\$344	\$144	\$260

■ 2022 ■ 2021 ■ 2020

Chart 3

Dryland Soybeans #59 Budget
Per Acre Cost Comparison 2020 to 2022



	Pesticides	Total Materials & Services	Field Operation Costs	Land Opportunity & R.E. Taxes
■ 2022	\$116	\$222	\$69	\$144
■ 2021	\$87	\$178	\$67	\$135
■ 2020	\$84	\$177	\$58	\$132

■ 2022 ■ 2021 ■ 2020

Glennis McClure
Associate Extension Educator, Farm & Ranch Mgmt Analyst
Department of Agricultural Economics
University of Nebraska – Lincoln
gmccclure3@unl.edu
402-472-0661