



Estimating Custom Rates for 2023 Wisconsin Farm Operations

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As the 2023 crop season get started, landowners and custom service providers are negotiating custom rates, but the newest Custom Rate Guide for Wisconsin is from 2020¹. Prices have increased a lot over the past three years. The Producer Price Index, a cost of production index for the whole US economy, has increased by 30%². Price indexes fertilizer are up by 57.3%, chemicals by 41.8%, fuels by 16.9%, and wage rates by 17.6% (see Table 5). With all these changes, how do farmers and custom operators develop and agree on a custom rate for 2023? Here we provide guidance to estimate this year's custom rate based on the 2020 Custom Rate Guide for Wisconsin.

Tables 1 to 4 report 2020 custom rates for Wisconsin and estimated custom rates for 2023 calculated by inflating the 2020 custom rates using two different inflation indexes. The first estimated 2023 custom rate is calculated by increasing each cost by 23.3% based on a USDA price index (described below). The second estimated 2023 custom rate is calculated by increasing the 2020 cost by the same percentage that the Iowa Custom Rate for that operation (or a similar operation) increased from 2020 to 2023³. The last column gives the specific percentage. Table 1 is for tillage operations, Table 2 for custom application, Table 3 for manure services, and Table 4 for custom planting. For the September update, Table 6 added haying operations, Table 7 added silage and grain combining, and Table 8 added grain drying.

These are estimates of average custom rates in 2023 intended to facilitate negotiations; they are not based on a recent survey. Custom rates vary around these averages across operators (e.g., due to timeliness discounts/premiums) and vary regionally in the state. The Wisconsin 2020 Custom Rate¹ guide gives the ranges seen at that time and we expect ranges in 2023 to be similar.

USDA Price Index (PPITW)

The USDA's Prices Paid Index for Commodities and Services, Interest, Taxes, and Farm Wage Rates (PPITW) averages the price inflation index for major cost components, weighted by the typical share of expenditures farms make for each component. Table 5 reports the price inflation index changes for major agricultural cost components (fertilizer, chemicals, fuels, etc.), generally consistent with the price increases farmers have seen over the last three years for these inputs. Table 5 also reports price inflation index changes after averaging into the PPITW index, as well as an indexes for production inputs and services (broadly, not just for agriculture), and for the crop and livestock sectors. We use the PPITW increase of 23.3% because custom rates depend on machinery, fuel, wage, and interest costs, which are captured by this index.

Thanks to all who respond to previous custom rate surveys. We are launching a new process in 2024 to publish surveys annually. We hope to get your support as always. Your input made this report possible. Thank you!

¹ https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/WI-CRate20.pdf

² <https://data.bls.gov/cgi-bin/surveymost>

³ <https://www.extension.iastate.edu/agdm/crops/html/a3-10.html>

Table 1. Estimated Rates for Custom Land Tillage in Wisconsin for 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Tillage	\$/acre	\$/acre	\$/acre	% Change
Chisel plowing	\$18.61	\$22.94	\$20.48	10.0%
Harrow combination	\$18.62	\$22.95	\$19.86	6.6%
Field cultivating	\$14.94	\$18.41	\$16.47	10.2%
Moldboard plowing	\$23.37	\$28.80	\$25.42	8.8%
Rotary hoe	\$11.58	\$14.27	\$11.86	2.4%
Vertical tillage	\$17.04	\$21.00	\$20.04	17.6%
Finishing disk	\$17.77	\$21.90	\$20.66	16.2%
Offset disk	\$16.89	\$20.82	\$19.59	16.0%
Disk w/ digger & drag	\$20.43	\$25.18	\$23.27	13.9%
Subsoiling (16-20 in. deep)	\$21.01	\$25.89	\$23.90	13.7%
Row cultivator with fertilizer	\$12.75	\$15.71	\$13.78	8.1%
Row cultivator without fertilizer	\$15.11	\$18.62	\$16.33	8.1%

Table 2. Estimated Rates for Custom Applications in Wisconsin for 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Fertilizer	\$/acre	\$/acre	\$/acre	% Change
Anhydrous (knife applicator)	\$13.00	\$16.02	\$14.59	12.2%
Bulk dry (broadcast)	\$6.19	\$7.63	\$8.33	34.6%
Liquid				
Broadcast	\$8.06	\$9.93	\$9.54	18.3%
Nozzles	\$10.48	\$12.92	\$12.40	18.3%
Pesticides (Ground Applied)				
Fungicide	\$8.91	\$10.98	\$9.31	4.5%
Herbicide				
Boom Sprayer	\$8.58	\$10.57	\$8.96	4.5%
Broadcast or banded (only)	\$12.27	\$15.12	\$15.39	25.5%
Insecticide				
Broadcast or banded (only)	\$9.00	\$11.09	\$11.29	25.5%

Note: Listed costs reflect application only and exclude the cost of materials.

Table 3. Estimated Rates for Custom Manure Services in Wisconsin for 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Cost Per Hour	\$/hr	\$/hr	\$/hr	% Change
Solid Manure				
Removal	\$99.43	\$122.55	\$140.04	40.8%
Spreading	\$111.67	\$137.63	\$154.74	38.6%
Removal and spreading	\$135.00	\$166.38	\$187.07	38.6%
Liquid Manure				
Hauling and spreading (surface)	\$105.12	\$129.56	\$123.69	17.7%
Hauling and spreading (injection)	\$132.50	\$163.30	\$155.91	17.7%
Agitation boat	\$283.44	\$349.33		
Cost Per Gallon (Liquid Manure)	\$/1,000 gal	\$/1,000 gal	\$/1,000 gal	
Hauling & spreading (surface)	\$9.37	\$11.55	\$11.03	17.7%
Dragline pumping & spreading (surface)	\$9.41	\$11.60	\$11.50	22.2%
Dragline pumping & spreading (injection)	\$9.30	\$11.46	\$11.36	22.2%

Table 4. Estimated Custom Rates for Seeding, Planting, and Drilling in Wisconsin for 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Air seeding with fertilizer	\$/acre	\$/acre	\$/acre	% Change
Small grains	\$18.40	\$22.68	\$21.47	16.7%
Soybeans	\$19.50	\$24.03	\$22.76	16.7%
Air seeding without fertilizer				
Small grains	\$19.67	\$24.24	\$21.08	7.2%
Soybeans	\$20.21	\$24.91	\$21.66	7.2%
Planting				
Corn (with fertilizer)	\$20.95	\$25.82	\$24.26	15.8%
Corn (without fertilizer)	\$20.35	\$25.08	\$24.28	19.3%
Small grains	\$19.29	\$23.77	\$22.51	16.7%
Soybeans (with fertilizer)	\$21.13	\$26.04	\$24.47	15.8%
Soybeans (without fertilizer)	\$19.86	\$24.48	\$23.70	19.3%
Drilling				
Alfalfa	\$19.84	\$24.45	\$26.79	35.0%
Soybeans	\$19.35	\$23.85	\$22.58	16.7%
Small grains	\$19.07	\$23.50	\$22.26	16.7%

Table 5. USDA Price Index Changes between 2020 and 2023

Item	% Change
Seed	3.9%
Fertilizer	57.3%
Chemicals	41.8%
Fuels	16.9%
Machinery	41.7%
Interest	20.8%
Wage rates	17.6%
PPITW* Price Index for Commodities, Services, Interest, Taxes, & Wages	23.3%
Production Inputs and Services	25.8%
PPITW Price Index for the Crop Sector	21.3%
PPITW Price Index for the Livestock Sector	21.2%

*PPITW refers expenditure weighted price index for prices paid by farmers for commodities, services, interest, taxes, and wages.

Table 6. Custom Hay Harvest Services, Wisconsin, 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Cost Per Acre	\$/acre	\$/acre	\$/acre	% Change
Mowing	\$14.48	\$17.85	\$14.91	3.0%
Mowing and conditioning	\$16.61	\$20.48	\$18.02	8.5%
Raking	\$8.14	\$10.04	\$8.34	2.5%
Tedding	\$7.58	\$9.35	\$6.81	-10.2%
Cost Per Bale	\$/bale	\$/bale	\$/bale	
Large Round Bales (>1,500 lbs)				
Baling	\$10.78	\$13.29	\$11.87	10.1%
Small square Bales (<250 lbs)				
Baling	\$1.00	\$1.23	\$1.39	39.1%

Table 7. Custom Silage Harvesting and Grain Combining Services, Wisconsin, 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Corn	\$/acre	\$/acre	\$/acre	% Change
Self-propelled chopper (dollars/hour)	\$473.1	\$583.33	\$508.99	8%
Bagging silage (dollars/ton)	\$5.18	\$6.39	\$4.81	-7%
Combine	\$33.59	\$41.42	\$37.79	12.5%
Harvest (combine, grain cart, haul local to farm)	\$41.56	\$51.24	\$51.20	23.2%
Small grains				
Combine	\$33.59	\$41.42	\$35.07	4.4%
Soybeans				
Combine	\$32.96	\$40.64	\$36.95	12.1%
Harvest (combine, grain cart, haul local to farm)	\$39.06	\$48.16	\$44.88	14.9%

Table 8. Custom Grain Drying, Wisconsin, 2023

Operation	2020 Custom Rate	2023 Estimated Custom Rate		
		Using USDA Price Index (+23.3%)	Using Increase in Iowa Custom Rate	
Corn	\$/acre	\$/acre	\$/acre	% Change
Dollars/bushel/point	\$0.06	\$0.07	\$0.06	7.14%