



Idaho Crop Input Price Summary for 2022

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Background

This report is a summary of prices for key inputs for crops grown in Idaho and is the first version since the “Idaho Crop Input Price Summary for 2014” authored by Paul E. Patterson and Kathleen M. Painter, published by the University of Idaho (UI) Department of Agricultural Economics and Rural Sociology (AERS).

Development of this report started in late-February 2022. The challenge with updating an input price summary report is that prices and inputs used by crop producers constantly change through product development and release by agribusinesses, adjustments in regulatory status, or other reasons. Thus, the authors took time to review the prior report and obtain opinions from UI Extension experts to verify relevance of products included in the 2014 report and identify products that have become relevant since the release of that report.

Additionally, the authors of the prior report had their own methods and resources which were not readily accessible for development of this report. Thus, in many cases it was necessary to devise new strategies for gathering data. Due to these challenges and efforts to release this report in calendar year 2022, this updated version is missing several elements that were in the 2014 report (see Appendix for the list). The involved UI AERS Department faculty have a goal to update this report more frequently in the years ahead. We hope this limited report will serve as a useful start to a revived series of reports.

For the input prices gathered, some are relevant on a statewide scope, while others have more regional variation.

Statewide Input Prices

Input prices that apply statewide include interest rates on operating and long-term farm business loans, farm labor rates, and irrigation power.

Interest rate data were obtained from several large agricultural lenders in Idaho and the Pacific Northwest in April 2022. Since then, the Federal Reserve has raised the federal funds rate, upon which other loan rates are based, from a target range of 0.25-0.50% to one of 3.75-4.00%. Since bank interest rates adjust with the federal funds rate, the interest rates reported here are likely much lower than those offered by agricultural lenders as of the end of 2022. However, these rates can still be useful for estimating where interest rates are today relative to the federal funds rate and display the variation across the differing loan maturity lengths.

Farm labor data were obtained from the Idaho Department of Labor who conduct comprehensive farm labor surveys. Irrigation power rates were provided by Idaho Power, the main electricity provider in Idaho. We are grateful to both for their data and insights.

Input Prices with Regional Variation

The input prices for which we were able to gather data that vary across regions in Idaho include surface water assessments for irrigation, fuel, and herbicides.

Surface water assessment rates were obtained from numerous irrigation district offices in each region, with the average for each region reported. We are grateful for the data provided by each irrigation district office.

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The fuel prices were obtained from a third-party website associated with the U.S. Department of Energy website, www.fueleconomy.gov, and are averages for January through June 2022 for multiple cities in each region. The unleaded and diesel prices were the prices as reported from this source, and the non-farm diesel prices were adjusted by removing the fuel tax as reported by the Idaho State Tax Commission. Farm diesel prices for Springfield, IL from USDA-AMS, and IL Dept. of AG Market News report 3195 are reported as well for comparison.

Herbicide prices were obtained primarily from two prominent agricultural chemical companies. One prominent agricultural company also provided some data for a portion of the products, and a smaller source did as well. Since these sources were gracious in providing the data, we reported them in the hope that they will be useful. However, we caution that due to the small sample number of sources, the reported prices may likely vary widely from those for the same products in specific areas.

National Input Prices and Producer Price Indices

Like herbicides, fertilizer price data were obtained from a limited number of sources. We compared these data to those reported in national databases, such as the price list for Springfield, IL from USDA-AMS, and IL Dept. of AG Market News report 3195, since these data are accessible online and updated on a bi-weekly basis. Local fertilizer prices were comparable in range to those from the USDA and Illinois Ag Market News, so only the Market News prices were reported.

Data for several potentially useful producer price indexes (PPI) provided in the Federal Reserve Bank of St. Louis Federal Reserve Economic Data database were also included. The PPIs reported are those for fertilizer, agricultural machinery, and general grain production. These are provided for context regarding the relative changes in prices across input categories and within them (e.g., among the reported types of fertilizer).

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Tables

Table 1. Interest rates for all Idaho crop regions, 2022 (prime)

	<u>2022</u>
Operating Interest (less than 12months)	3.25%
Intermediate Term Interest (3-7 years)	5.54%
Long Term Interest (15-30 years)	6.68%

Note: Data are from a large agricultural lending institution gathered in April 2022. Other surveyed institutions had similar rates for long-term loans, but there was more variation for operating interest.

Table 2. Farm labor costs for all Idaho crop regions, 2021 and 2022

		<u>2021</u>		<u>2022</u>	
		Taxes & Benefits%	Base Wage	Effective Wage	Base Wage
General Farm Labor (Seasonal)	15%	14.29	16.43	15.76	18.12
Truck Drivers (harvest)	15%	18.94	21.78	20.88	24.02
Irrigation Labor:					
Irrigation Labor (HL & WL)	30%	17.29	22.47	19.06	24.78
Irrigation Labor (CP & L)	25%	17.29	21.61	19.06	23.82
Equipment Operator	25%	16.19	20.23	17.85	22.31

Note: All data were provided by the Idaho Department of Labor in April 2022.

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Table 3. Irrigation power costs for Southern Idaho, 2021 and 2022

	\$/ac-inch applied		
	<u>2021</u>	<u>2022</u>	<u>Change</u>
Center Pivot w/ Corner System, 0 lift	2.53	2.76	9.24%
Center Pivot w/ Corner System, 100 ft. lift	3.65	3.99	9.24%
Center Pivot w/ Corner System, 200 ft. lift	4.77	5.21	9.24%
Center Pivot w/ Corner System, 300 ft. lift	5.89	6.44	9.24%
Center Pivot w/ Endgun, 0 lift	1.68	1.84	9.24%
Center Pivot w/ Endgun, 100 ft. lift	2.69	2.94	9.24%
Center Pivot w/ Endgun, 200 ft. lift	3.69	4.03	9.24%
Center Pivot w/ Endgun, 300 ft. lift	4.70	5.13	9.24%
Center Pivot w/o Endgun, 0 lift	1.58	1.73	9.24%
Center Pivot w/o Endgun, 100 ft. lift	2.54	2.77	9.24%
Center Pivot w/o Endgun, 200 ft. lift	3.49	3.82	9.24%
Center Pivot w/o Endgun, 300 ft. lift	4.45	4.86	9.24%
Low Pressure Center Pivot w/o Endgun, 0 lift	0.92	1.01	9.24%
Low Pressure Center Pivot w/o Endgun, 100 ft. lift	1.88	2.05	9.24%
Low Pressure Center Pivot w/o Endgun, 200 ft. lift	2.83	3.09	9.24%
Low Pressure Center Pivot w/o Endgun, 300 ft. lift	3.79	4.14	9.24%
Wheel line, 0 lift	1.52	1.66	9.24%
Wheel line, 100 ft. lift	2.48	2.70	9.24%
Wheel line, 200 ft. lift	3.43	3.75	9.24%
Wheel line, 300 ft. lift	4.38	4.79	9.24%
Low Pressure Sprinklers Wheel line, 0 lift	0.97	1.06	9.24%
Low Pressure Sprinklers Wheel line, 100 ft. lift	1.92	2.10	9.24%
Low Pressure Sprinklers Wheel line, 200 ft. lift	2.88	3.15	9.24%
Low Pressure Sprinklers Wheel line, 300 ft. lift	3.83	4.19	9.24%

Note: All data were provided by Idaho Power in June 2022.

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Table 4. Schedule I24S - agricultural irrigation secondary

Charge Type	6/1/2021	6/1/2022	% Change
In-Season			
Service Charge (\$)	22.00	22.00	0
Demand Charge (\$/per kW)	6.94	7.06	1.7%
Energy Charge, (\$/first 164 kWh per kW)	0.06	0.06	1.8%
Energy Charge, (\$/All Other kWh per kW)	0.05	0.06	1.8%
Out-of-Season			
Service Charge (\$)	3.50	3.50	0%
Energy Charge (\$/All kWh)	0.0659	0.0671	1.8%
Trackers			
Energy Efficiency Rider	3.1%	3.1%	0.0%
PCA Revenue (\$/kWh)	0.00757	0.01390	83.6%
Average Rate - 100 hp Pump \$/kWh	\$0.08	\$0.09	9.2%

Note: All data were provided by Idaho Power in June 2022.

Table 5. Surface water assessments in \$/ acre by Southern Idaho region, 2021 and 2022

	<u>SWI</u>	<u>SCI</u>	<u>EI - All</u>	<u>EI - S</u>	<u>EI - N</u>
2021	59.75	72.67	32.71	53.00	12.42
2022	64.92	76.00	36.50	60.50	12.50
Change	+5.17	+3.33	+3.79	+7.50	+0.08
% Change	8.6%	4.6%	11.6%	14.2%	0.7%

Note: SWI is Southwestern Idaho; SCI is Southcentral Idaho; EI-All is the average of all Eastern Idaho counties. EI – S is the average of Bannock, Bingham, and Power counties; EI-N is the average of Bonneville, Jefferson, and Madison counties. Data were gathered from several irrigation district offices in May and June 2022.

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Table 6. Idaho fuel prices by region, 2022

	<u>NI</u>	<u>SCI</u>	<u>EI</u>	<u>State Average</u>
Unleaded Gasoline (\$/gallon)	3.91	4.19	4.03	4.07
Diesel (\$/gallon)	4.56	4.77	4.65	4.64
Off-Road Diesel (\$/gallon)	3.99	4.18	4.05	4.08
Farm Diesel, Springfield, IL (\$/gallon)				4.12

Note: NI is North Idaho; SCI is Southcentral Idaho; EI is Eastern Idaho. Data were gathered from third-party websites linked on the U.S. Department of Energy website, www.fueleconomy.gov, and are averages for January through June 2022 for multiple cities in each region. Off-road diesel was calculated based on the standard diesel price with the fuel tax as reported by the Idaho State Tax Commission removed. The farm diesel for Springfield, IL value is the average for January 2022 through June 2022 obtained from USDA-AMS, and IL Dept. of AG Market News report 3195.

Table 7. Fertilizer component prices, 2021 and 2022

	2021 (\$/ton)	2022 (\$/ton)	% Change	2022 summer average (\$/ton)
Anhydrous Ammonia	835	1,469	+76%	1,501
Urea 46-0-0	604	901	+49%	926
Liquid Nitrogen 28-0-0	369	616	+67%	626
DAP (Diammonium Phosphate 18%N 46%P)	695	941	+35%	963
MAP (Monoammonium Phosphate 11%N 52%P)	710	947	+33%	966
Potash (Potassium)	559	848	+52%	855

Note: All reported data were obtained from the USDA AMS and IL Dept. of AG Market News report 3195. Several Idaho sources were obtained as well, and since they were close in range the USDA AMS and IL Dept. of AG Market News data were reported due to their online accessibility. The 2022 summer average is the average value for March – August 2022.

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Table 8. Herbicide prices for northern and southern Idaho, 2022

	<u>Unit</u>	<u>SI</u> <u>(\$/unit)</u>	<u>NI</u> <u>(\$/unit)</u>
2, 4-D Amine 4	gal	32.44	38.00
2, 4-D Ester LV4	gal	48.93	50.00
2, 4-DB 200	gal		30.00
AZA-Direct	gal		348.50
Affinity BroadSpec 50 SG	oz	12.11	9.61
Affinity TankMix 50 SG	oz	9.98	7.00
Aim 2EC	gal	198.70	140.05
Ally Extra SG	oz	10.69	9.00
Ally XP	oz	12.35	8.95
Amber (triasulfuron)	oz	13.78	
Assure II EC	gal		80.50
Atrazin 4L	gal	26.60	23.38
Axial Star	gal	165.06	127.53
Axial XL	gal	170.34	130.00
Axiom DF	lb	37.34	
Basagran	gal		78.95
Beyond	gal	515.38	420.09
Boundary	gal		64.00
Brox 2EC (Buctrill)	gal	67.50	55.21
Brox M	quart	75.29	58.51
Callisto (4lb)	gal		265.00
Casoron 4G	lb	4.28	3.55
Chateau SW	lb		54.55
Clarity	gal	110.77	95.13
Curtail	gal		70.00
Curtail M	gal	73.63	61.20
Derive 4F	gal		91.50
Derive DF	lb		15.00
Derive Metribuzin 75DF	lb		18.74
Dicamba	gal	71.54	95.00
Discover NG	gal	177.56	162.12
Distinct	lb		50.16
Diuron 80DF	lb	29.69	16.84
Dual II Magnum 7.64EC	gal		102.37
Dual Magnum 7.6EC	gal	83.65	87.26
Eptam 7E	gal	70.68	61.43
Escort XP	oz		5.52
Everest 2.0	oz		8.00
Everest 3.0	oz	6.60	
Express w/ Totalsol	oz	18.00	16.37

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Far-Go 4EC	gal	74.96	57.93
Finesse	oz	17.34	
Fusilade DX	gal		220.00
GillyStar Plus 3SL	gal	59.38	
GlyStar Original	gal	44.54	
Goal 2XL	gal		78.32
GoldSky	gal		170.76
Gramoxone Inteon	gal		30.78
Harmony Extra SG	oz	13.25	12.38
Harmony SG w/TotalSol	oz		45.35
Harness 7EC	gal		107.31
Huskie	gal	109.92	92.92
Linex 4L	gal		100.00
Lorox DF	lb	34.20	34.23
MCPA--Ester	gal		36.87
MH-300	gal		0.61
Matrix SG	oz		11.00
Metricor DF	lb		12.78
Mustang Max	gal	179.50	133.30
Nortron 4SC	gal		144.86
Orion	gal	87.69	
Ospery	oz	4.36	
Outlook 6EC	gal	139.80	121.22
Poast 1.5EC	gal	121.89	98.50
Powerflex HL	lb		84.51
Prowl 3.3 EC	gal	42.28	
Prowl H2O	gal	48.83	38.18
Pursuit	gal	280.25	249.39
Raport Broadspec	gal	10.93	
Raptor 1SL	gal	429.39	411.73
Reflex	gal		45.00
Reglone Desiccant (2.5G)	gal		63.69
Rely	gal		74.00
Roundup Power Max (2.5G)	gal		57.60
Roundup Power Max (4.5 lb)	gal	54.01	
Roundup RT III	gal	50.21	
Select Max 1EC	gal	125.21	102.50
Sinbar WDG	lb		49.95
Sonalan HFP	gal		53.50
Spartan 4F	gal	204.25	
Spartan Charge	gal		221.25
Starane Flex	gal	86.50	65.64
Starane NXT	gal	98.61	99.35
Starane Ultra	gal	265.15	210.43

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Stinger	gal	179.50	106.79
Sulfuric Acid	gal		273.15
Tordon 22K	gal	91.68	88.50
Treflan HFP 4EC	gal	45.60	31.95
Tri-Cor 4F	gal		94.60
Tri-Cor 75DF	lb	14.25	16.74
Triflurex HFP 4EC	gal		44.30
Velpar Alfamx DG	lb	23.33	22.67
Velpar LCU-TKI	gal	114.33	88.17
Vida	gal		465.50
Weedmaster	gal		34.50
Weedone 650	gal	69.97	
Weedone LV4	gal	40.34	
Weedone LV6	gal	65.27	41.65
Widematch	gal	81.56	70.99
Zidua SC	gal		660.00

Note: Data are primarily from two prominent agricultural chemical companies. One prominent agricultural company also provided some data for a portion of the products, and a smaller source did as well. For the products for which there were multiple sources, the average is reported. Most data were provided in September 2022, but some were provided in November 2022. Please be advised that we tried to obtain data from more sources but were unsuccessful, and due to the few numbers of sources these prices are likely not representative of prices of these products in many local areas.

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Table 9. Select crop producer price index values, 2021 through September 2022

Month	PPI: Chemicals, Fertilizer Index 2021 = 100	PPI: Agricultural Machinery Index 2021 = 100	PPI: Farm products, grains Index 2021 = 100
January 2021	0.718	0.947	0.866
February 2021	0.755	0.951	0.894
March 2021	0.796	0.956	0.890
April 2021	0.839	0.962	0.915
May 2021	0.897	0.971	1.148
June 2021	0.969	0.986	1.069
July 2021	1.040	0.995	1.043
August 2021	1.054	1.010	1.109
September 2021	1.093	1.026	1.020
October 2021	1.171	1.047	0.975
November 2021	1.277	1.065	1.019
December 2021	1.390	1.084	1.052
January 2022	1.401	1.086	1.056
February 2022	1.418	1.107	1.076
March 2022	1.507	1.114	1.248
April 2022	1.579	1.147	1.293
May 2022	1.559	1.152	1.302
June 2022	1.474	1.173	1.327
July 2022	1.389	1.175	1.170
August 2022	1.391	1.183	1.206
September 2022	1.393	1.192	1.335
Implied % change from 2021 to September 2022	39%	19%	34%

Note: PPI is the Producer Price Index. All indices were obtained from the Federal Reserve Economic Data database of the Federal Reserve Bank of St. Louis. The PPI: Chemicals, Fertilizer index is from report numbered WPS0652; the PPI: Agricultural Machinery index is from report numbered WPU111; the PPI: Farm products, grains index is from report numbered WPS012.

Appendix

Input categories for which price data were reported in 2014 but not gathered in 2022

There were several input categories for which the authors attempted to gather price data but were unsuccessful within the timeline for report release. These categories are:

- Custom fertilizer and chemical application rates
- Sticker/spreaders
- Fungicides
- Fumigant/nematicides
- Insecticides
- Seeds

In the next section of the appendix, we provide insights into background information gathered on whether the herbicides and pesticides included in the “Idaho Crop Input Price Summary for 2014” remain relevant. We also determined that the fumigant/nematicides included in the 2014 report are no longer relevant as of 2022. Stakeholder insights regarding strategies and/or methods for gathering price data for the above categories will be much appreciated.

Herbicide and insecticide list changes between 2014 and 2022

University of Idaho Extension expert weed scientists and entomologists reviewed the lists of herbicides and insecticides that were reported in the “Idaho Crop Input Price Summary for 2014” to determine whether they remain valid or can be removed as they are no longer relevant due to regulatory status changes, releases of updates by chemical companies, or other reasons. They also provided recommendations for new herbicides and insecticides that have come into use by producers since the 2014 report was released. The changes in lists of herbicides and insecticides between the 2014 and 2022 report are in tables A1 and A2, respectively. We will be grateful for additional feedback as we move forward regarding keeping these product lists as up to date and relevant as possible.

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Table A1. Changes to herbicide list between 2014 and 2022 reports

<u>In 2014 report, removed for 2022 report</u>	<u>New for 2022 report</u>
2, 4-DB 200	Boundary
Accent Q	Derive 4F
Banvel 4L	Discover NG
Barrage HF	Everest 3.0
Beacon WDG	Express
Brox M Ultra	Linex 4L
Buctril 2EC	Matrix SG
Curtail	MH-30
Diuron 80DF	Rapport Broadspec
Express SG	Rely
Fusilade DX	Spartan Charge
Harmony Extra XP	Starane Flex
Matrix 25DF	Velpar LCU-TKI
Maverick WDG	Velpar Alfamx DG
MCPA-Amine	Vida
Micro-Tech	Weedone 650
Poast Plus	Weedone LV4
Select 2EC	Weedone LV6
Starane 1.5EC	Widematch
Treflan TR10	Zidua SC
Velpar 2L	
Weedone 638	
Widematch EC	

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Table A2. Changes to insecticide list between 2014 and 2022 reports

<u>In 2014 report, not relevant in 2022</u>	<u>New for 2022 report</u>
Lorsban 4 E	AdLogic
Lorsban 15G	Blackhawk
Monitor 4	Coragen
Temik 15G (L-N-L)	Exirel
	Fastac
	Intrepid 2F
	Nipsit Inside
	Poncho Beta
	Sivanto
	Terraxa
	Transform
	Ventacor

Feedback contact information

Want to help improve this project? We would love to hear feedback from industry professionals on how to make these reports more useful! Feel free to get in touch with the authors using the contact information below:

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*If you are looking for additional resources or help preparing your own enterprise budget(s), please contact your county's extension office

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