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Research Report

Representative farms economic outlook for the 2023 FAPRI/AFPC baseline

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Representative Farms Economic Outlook for the 2023 FAPRI/AFPC Baseline

Briefing Paper 23-1

March 2023



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**REPRESENTATIVE FARMS ECONOMIC
OUTLOOK FOR THE 2023
FAPRI/AFPC BASELINE**

AFPC Briefing Paper 23-1

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REPRESENTATIVE FARMS ECONOMIC OUTLOOK FOR THE 2023 FAPRI/AFPC BASELINE

The farm-level economic impacts of the FAPRI 2023 Baseline on representative crop and livestock operations are projected in this report, assuming provisions of the 2018 Farm Bill are in effect and continue throughout the 2023-2028 study period. The current representative farm analysis output reflects an evaluation of ARC/PLC program elections for the farms given provisions of the 2018 Farm Bill. Producers are assumed to enroll in the program resulting in the highest ending cash reserves at the end of the projection period; as farm update meetings are conducted, adjustments, if necessary, are made to program elections. Coronavirus Food Assistance Program (CFAP) payments for 2020 on were included in this analysis on all eligible inventory/production/acres. The analysis was conducted using a whole farm simulation model developed by AFPC with necessary data sourced from:

- Producer panel cooperation to develop economic information to describe and simulate representative crop, livestock, and dairy farms, and
- Projected prices, policy variables, and input inflation rates from the Food and Agricultural Policy Research Institute (FAPRI) 2023 Baseline.

The simulations incorporate historical risk faced by farmers for prices and production. This report presents the results of the 2023 Baseline in a risk context using selected simulated probabilities and ranges for annual financial measures. The probability of a farm experiencing negative ending cash reserves and the probability of a farm losing real net worth are included as indicators of the cash flow and equity risks facing farms through the year 2028.

DEFINITIONS OF VARIABLES IN THE SUMMARY TABLES

- **Overall Financial Position, 2023-2028** -- As a means of summarizing the representative farms' economic efficiencies, liquidity positions, and solvency positions, AFPC classifies each farm as being in a good (green), marginal (yellow) or poor (red) position. AFPC defines a farm to be in a good financial position when it has less than a 25 percent chance each of a negative ending cash position and less than a 25 percent chance of losing real net worth through 2028. If the probabilities of these occurrences are between 25 and 50 percent, the farm is classified as marginal. Probabilities greater than 50 percent place the farm in a poor financial position.
- **Receipts** -- 2023-2028 average cash receipts from all farm related sources, including market sales, PLC/ARC payments, marketing loan gains/LDPs, crop insurance indemnities, and other receipts.
- **Payments** -- 2023-2028 average annual PLC or ARC payments and marketing loan gains/LDPs for representative farms and ranches.
- **NCFI** -- 2023-2028 average net cash farm income equals average total receipts minus average total cash expenses.
- **Reserve 2028** -- equals total cash on hand at the end of year 2028. Ending cash equals beginning cash reserves plus net cash farm income and interest earned on cash reserves less principal payments, federal taxes (income and self-employment), state income taxes, family living withdrawals, and actual machinery replacement costs (not depreciation).
- **Net Worth 2028** -- equity equals total assets including land minus total debt from all sources and is reported at the end of 2028.
- **CRNW** -- annualized percentage change in the operator's real net worth from January 1, 2020 through December 31, 2028, after adjusting for inflation.

EXECUTIVE SUMMARY

The Agricultural and Food Policy Center (AFPC) at Texas A&M University develops and maintains data to simulate 91 representative crop, dairy, and livestock operations in major production areas in 30 states. The chief purpose of this analysis is to project the economic viability of those farms by region and commodity for 2023 through 2028. The data necessary to simulate the economic activity of these operations are cultivated through ongoing cooperation with panels of agricultural producers in selected states. The Food and Agricultural Policy Research Institute (FAPRI) provides projected prices, policy variables, and input inflation rates in their 2023 Baseline.

Under the 2023 Baseline, 39 of the 64 crop farms are in good liquidity condition (less than a 25 percent chance of negative ending cash reserves by 2028). Nine crop farms have between a 25 percent and a 50 percent likelihood of negative ending cash reserves, and the remaining 16 crop farms have greater than a 50 percent chance of negative ending cash reserves. Additionally, 43 of the 64 crop farms are in a good equity position (less than a 25 percent chance of decreasing real net worth during the study period). Eight crop farms have between a 25 percent and 50 percent likelihood of losing real net worth, and 13 crop farms have greater than a 50 percent probability of decreasing real net worth by 2028. The following discussion provides an overall evaluation by commodity considering both liquidity and equity measures.

- **FEEDGRAIN FARMS:** Eighteen of the 25 feedgrain farms are in good overall financial condition. Four farms are classified in marginal condition; three are in poor condition.
- **WHEAT FARMS:** Nine representative wheat farms are classified in good overall financial condition, one is in marginal condition, and one is in poor condition.
- **COTTON FARMS:** Six of the 13 cotton farms are classified in good condition, four are in marginal condition, and three are in poor condition.
- **RICE FARMS:** Four of the 15 rice farms are projected to be in good financial condition. Two rice farms are projected to be in marginal condition, and nine are in poor condition.
- **DAIRY FARMS:** Nine of the 17 dairies are in good overall financial condition. Two dairies are classified in marginal condition along with another six in poor condition.
- **BEEF CATTLE RANCHES:** Five of the 10 cattle ranches are classified in good financial condition, two are projected to be in marginal condition, and three are in poor condition.

Table 1. FAPRI 2023 Baseline Crop and Livestock Prices, 2021-2028.

	2021	2022	2023	2024	2025	2026	2027	2028
Crop Prices								
Corn (\$/bu.)	6.00	6.69	5.33	4.81	4.67	4.53	4.44	4.35
Wheat (\$/bu.)	7.63	9.08	7.38	6.57	6.28	5.99	5.91	5.80
Upland Cotton Lint (\$/lb.)	0.9140	0.8253	0.7408	0.7002	0.7324	0.7589	0.7650	0.7646
Sorghum (\$/bu.)	5.94	6.84	4.95	4.67	4.62	4.56	4.49	4.42
Soybeans (\$/bu.)	13.30	14.22	12.15	11.78	11.31	11.15	10.99	10.88
Barley (\$/bu.)	5.31	7.30	6.09	5.37	5.07	4.94	4.87	4.81
Oats (\$/bu.)	4.55	4.95	4.02	3.92	3.87	3.85	3.84	3.83
All Rice (\$/cwt.)	16.10	19.15	16.74	16.36	16.09	15.96	15.99	16.05
Soybean Meal (\$/ton)	419.49	401.17	330.32	311.31	295.88	291.54	287.77	285.04
All Hay (\$/ton)	193.00	236.30	206.45	184.64	176.28	175.93	178.53	182.57
Peanuts (\$/ton)	486.00	544.02	504.85	472.26	458.24	455.25	456.48	457.98
Cattle Prices								
Feeder Cattle (\$/cwt)	157.65	181.51	195.92	214.23	224.14	225.68	218.84	214.69
Fed Cattle (\$/cwt)	122.40	144.40	155.34	160.22	163.78	163.99	159.47	156.47
Culled Cows (\$/cwt)	63.56	76.07	82.70	87.48	91.24	91.68	87.98	85.23
Milk Price								
U.S. All Milk Price (\$/cwt)	18.54	25.55	21.49	20.74	20.65	20.35	20.19	20.18

Source: Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri-Columbia.

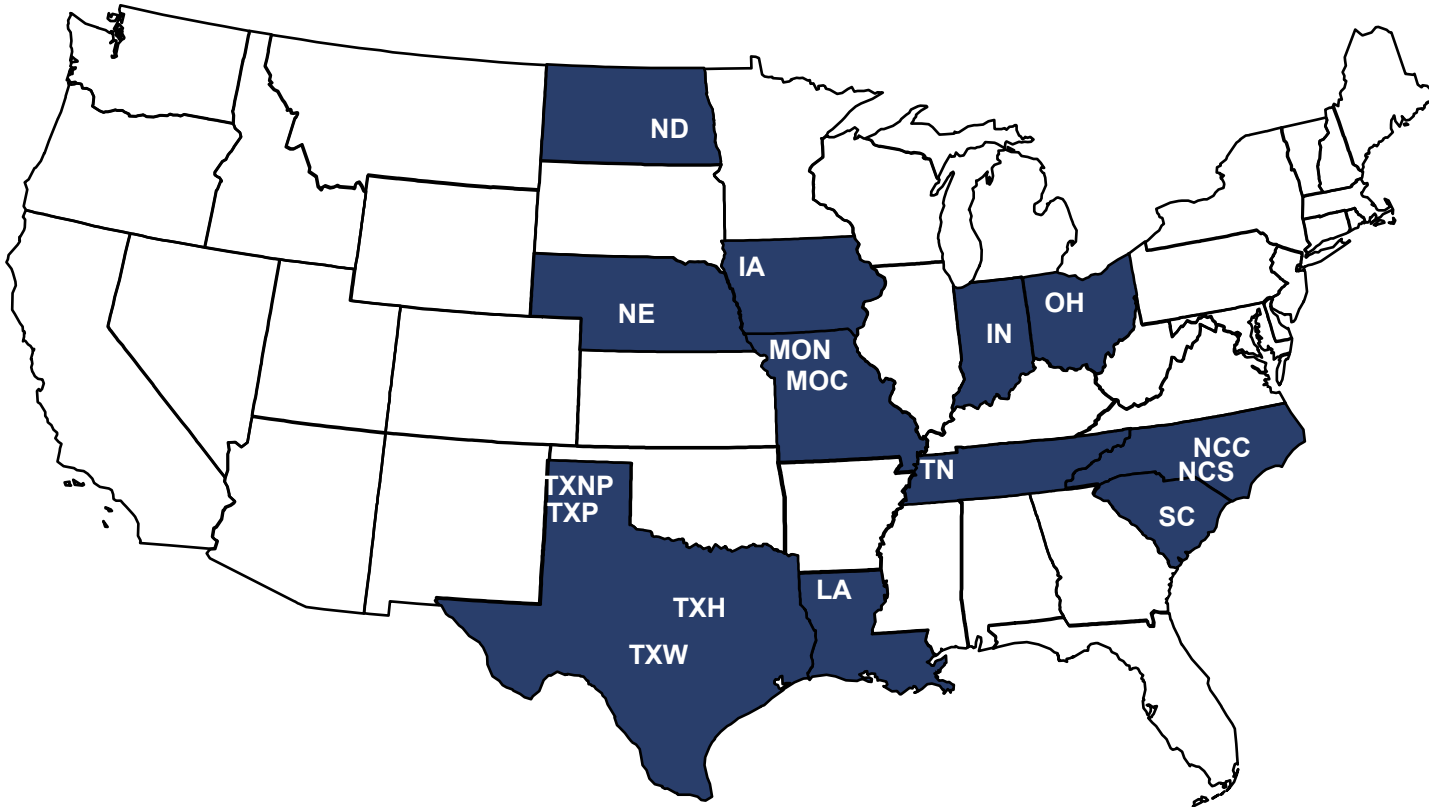
Table 2. FAPRI 2023 Baseline Assumed Rates of Change in Input Prices and Annual Changes in Land Values, 2022-2028.

	2022	2023	2024	2025	2026	2027	2028
Annual Rate of Change for Input Prices Paid							
Seed Prices (%)	10.19	9.53	3.66	1.13	0.61	0.51	0.49
All Fertilizer Prices (%)	44.60	-12.51	-16.06	-14.84	-1.08	9.67	1.17
Herbicide Prices (%)	39.16	-0.26	-8.23	-7.78	1.42	1.62	1.70
Insecticide Prices (%)	39.17	9.30	-7.52	-7.47	1.79	1.92	1.96
Fuel and Lube Prices (%)	43.11	-3.42	-18.66	-3.41	0.32	2.19	1.88
Machinery Prices (%)	17.72	-5.16	-5.39	-1.25	0.62	1.22	1.14
Wages (%)	7.38	4.49	4.21	3.71	3.67	3.55	3.53
Supplies (%)	11.46	1.17	0.35	1.66	2.11	2.14	2.15
Repairs (%)	11.30	-4.14	1.18	2.36	2.67	2.77	2.88
Services (%)	9.93	2.84	0.91	1.47	2.20	2.30	2.36
Taxes (%)	3.77	6.58	9.04	3.79	2.00	2.79	3.84
PPI Items (%)	15.33	0.71	-2.90	-1.13	0.61	0.92	0.70
PPI Total (%)	13.82	1.95	-1.56	-0.64	0.90	1.30	1.19
Annual Change in Consumer Price Index (%)	8.00	3.87	2.17	1.98	2.15	2.20	2.09
Annual Rate of Change for U.S. Land Prices (%)	12.43	5.55	0.27	0.27	1.31	1.30	0.88

Source: Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri-Columbia.

Representative Farm: Feed Grains

- Overall, eighteen feed grain farms are characterized as good, four are marginal, and three are in poor condition.
- Seven of the twenty-five farms will be under moderate to severe cash flow stress; three of these farms also have a greater than 25 percent chance of losing real net worth.



Characteristics of Panel Farms Producing Feed Grains, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Feed Grains (acres)
IAG1350	1,350	4,363.00	0.15	1,593.00	1,350
IAG3400	3,400	14,443.00	0.15	3,760.70	3,400
NEG3000	3,000	11,333.00	0.17	3,973.10	3,000
NEG4500	4,500	23,628.00	0.18	5,537.70	4,200
NDG3000	3,000	7,438.00	0.13	2,257.60	2,500
NDG9000	9,000	26,417.00	0.16	6,776.70	7,500
ING1000	1,000	5,166.00	0.14	1,062.90	1,000
ING3500	3,500	17,597.00	0.14	3,956.00	3,500
OHG850	850	5,711.00	0.16	847.40	765
OHG1800	1,800	7,950.00	0.14	1,964.50	1,620
MOCG2300	2,300	16,001.00	0.13	2,172.60	2,300
MOCG4200	4,200	23,855.00	0.13	3,971.60	4,200
MONG2300	2,300	17,385.00	0.14	2,611.00	2,250
LANG2500	2,500	4,683.00	0.23	2,038.80	1,875
TNG3000	3,000	8,360.00	0.18	2,809.10	3,000
TNG5000	5,000	13,818.00	0.18	4,471.60	5,000
NCSP2000	2,000	5,811.00	0.14	2,230.90	1,600
NCC2030	2,000	3,674.00	0.12	1,532.60	1,400
SCC2000	2,000	4,661.00	0.14	2,043.20	1,200
SCG3500	3,500	10,290.00	0.12	4,418.00	2,150
TXNP3450	3,450	11,697.00	0.11	3,944.20	1,554
TXNP10880	10,880	28,185.00	0.12	12,301.80	5,234
TXPG3000	3,000	8,398.00	0.20	2,836.60	1,880
TXHG3000	3,000	4,231.00	0.17	1,713.90	2,000
TXWG1600	1,600	2,685.00	0.23	860.90	1,100

Representative Farm: Feed Grains

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
18/4/3				
IAG1350			5-30	2-8
IAG3400			1-1	1-1
NEG3000			1-1	1-1
NEG4500			1-37	1-3
NDG3000			1-2	1-1
NDG9000			1-1	1-1
ING1000			1-1	1-1
ING3500			1-1	1-1
OHG850			1-14	1-1
OHG1800			1-1	1-1
MOCG2300			1-1	1-1
MOCG4200			1-1	1-1
MONG2300			1-1	1-1
LANG2500			56-78	84-72
TNG3000			5-35	8-18
TNG5000			1-1	1-1
NCSP2000			18-51	32-40
NCC2030			1-1	1-1
SCC2000			2-23	24-23
SCG3500			1-1	2-1
TXNP3450			1-1	1-1
TXNP10880			1-1	1-1
TXPG3000			11-37	1-3
TXHG3000			4-24	15-23
TXWG1600			42-77	25-48

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Feed Grains and Oilseeds

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
IAG1350	1,263.56	21.58	202.44	242.87	4,105.42	1.24
IAG3400	2,947.30	47.39	756.37	2,597.09	15,389.82	3.39
NEG3000	3,367.02	47.16	662.08	2,461.94	11,865.17	3.50
NEG4500	4,827.28	57.19	726.09	531.39	22,237.26	1.82
NDG3000	1,799.87	32.60	497.33	1,347.86	7,881.77	2.92
NDG9000	5,418.58	92.20	1,901.29	8,191.53	30,848.32	5.14
ING1000	850.99	13.35	298.71	911.96	5,553.31	3.18
ING3500	3,250.87	44.93	816.54	3,186.32	18,845.64	3.28
OHG850	673.25	11.02	203.22	262.52	5,537.16	2.01
OHG1800	1,553.69	31.32	728.42	3,413.71	9,589.77	5.35
MOCG2300	1,720.85	19.82	730.24	2,726.50	17,400.19	3.34
MOCG4200	3,131.31	31.78	1,417.65	6,451.14	27,290.90	4.19
MONG2300	2,104.00	28.16	901.41	4,162.54	19,192.99	3.76
LANG2500	2,264.95	41.57	158.05	(797.14)	3,393.47	(1.51)
TNG3000	2,442.72	42.11	312.88	311.18	7,687.06	1.39
TNG5000	4,359.54	62.64	982.31	3,903.29	15,342.63	4.61
NCSP2000	1,849.21	46.82	242.18	(42.06)	5,197.98	0.07
NCC2030	1,328.88	26.20	443.01	2,172.33	4,703.91	6.00
SCC2000	1,728.66	36.02	216.83	447.24	4,372.50	0.85
SCG3500	3,714.65	69.26	569.62	2,582.51	10,802.82	2.51
TXNP3450	3,176.87	51.39	752.37	4,505.09	13,648.83	4.15
TXNP10880	9,868.63	103.74	1,834.34	13,337.06	32,805.72	4.21
TXPG3000	2,208.52	55.26	331.12	236.04	7,558.49	1.54
TXHG3000	1,349.25	27.11	190.83	441.12	3,737.69	0.60
TXWG1600	684.09	16.67	75.59	(353.78)	1,991.21	(1.22)

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

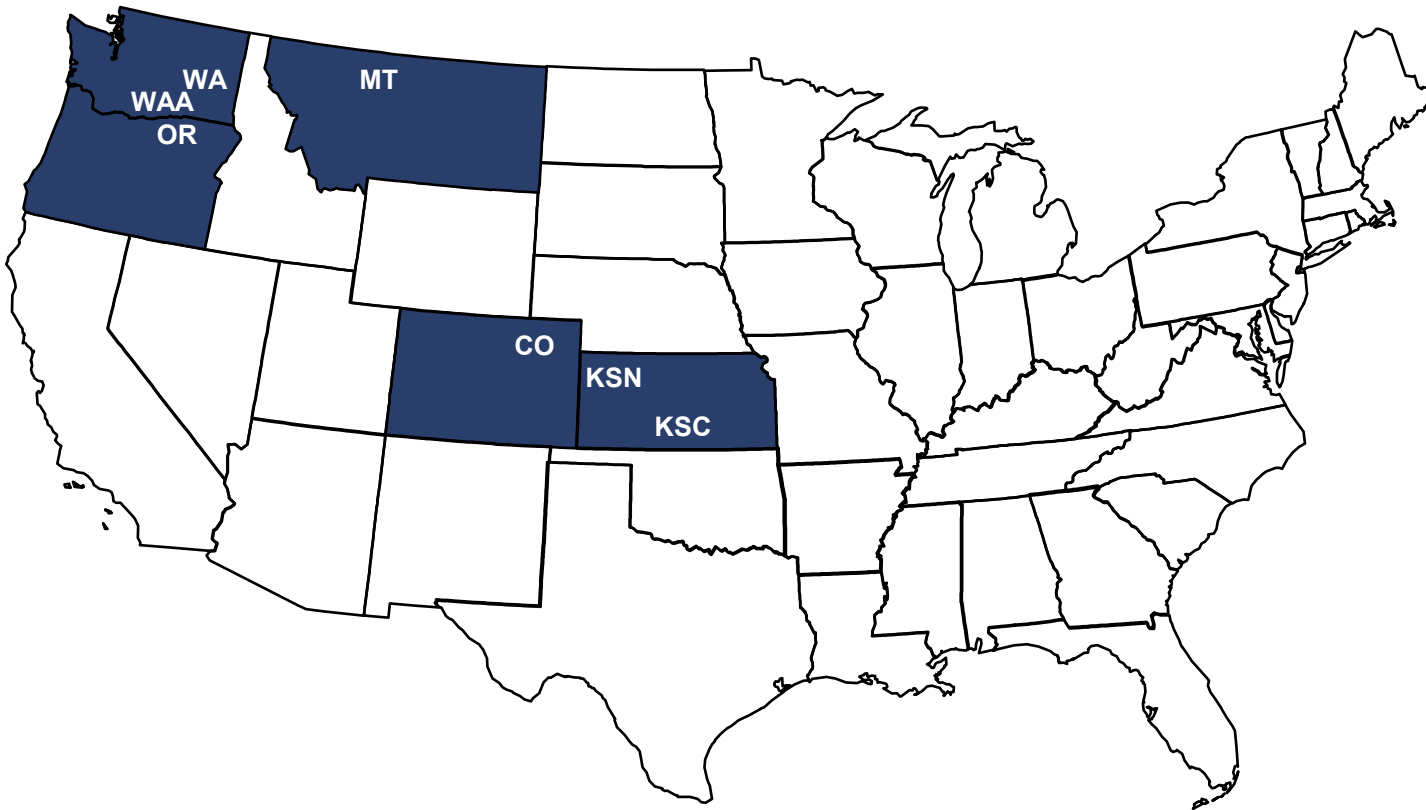
4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

Representative Farm: Wheat

- Nine wheat farms are projected to be in good overall financial condition, one is in marginal condition, and one is in poor condition.
- Two of the eleven wheat farms are expected to feel significant liquidity pressure over the period; one of these two farms also has a greater than 50 percent chance of losing wealth by the end of the projection period.



Characteristics of Panel Farms Producing Wheat, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Wheat (acres)
WAW2800	2,800	4,558.00	0.11	1,866.10	1,840
WAW10000	10,000	15,185.00	0.13	6,418.80	5,800
WAAW5500	5,500	3,454.00	0.19	1,031.60	2,600
ORW4500	4,500	2,716.00	0.17	767.90	2,250
MTW9500	9,500	12,331.00	0.14	2,739.00	3,534
KSCW3000	3,000	5,399.00	0.12	2,202.90	1,000
KSCW8000	8,000	12,904.00	0.15	5,741.90	3,000
KSNW4000	4,000	3,909.00	0.15	1,493.80	1,200
KSNW8000	8,000	14,927.00	0.11	4,902.30	1,200
COW3000	3,000	4,996.00	0.16	892.40	1,013
COW11500	11,500	19,567.00	0.16	4,397.30	3,633

Representative Farm: Wheat

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
9/1/1				
WAW2800			1-1	1-1
WAW10000			1-2	1-1
WAAW5500			56-93	46-81
ORW4500			13-27	15-19
MTW9500			1-1	1-1
KSCW3000			1-1	1-1
KSCW8000			1-1	1-1
KSNW4000			1-1	1-1
KSNW8000			1-1	1-1
COW3000			1-1	1-1
COW11500			1-2	1-1

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Wheat

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
WAW2800	1,547.08	52.77	355.06	1,659.21	5,296.02	4.08
WAW10000	5,266.59	142.01	987.09	4,909.67	17,172.84	3.86
WAAW5500	788.51	24.89	26.60	(1,080.81)	2,215.76	(4.20)
ORW4500	592.54	18.65	176.79	227.82	2,493.71	1.23
MTW9500	2,259.55	86.37	874.67	3,237.28	13,920.56	4.06
KSCW3000	1,894.01	13.10	535.37	1,994.08	6,699.18	5.36
KSCW8000	4,916.64	62.14	1,181.86	6,316.35	15,522.85	5.44
KSNW4000	1,135.18	19.75	355.14	1,073.88	4,218.01	3.56
KSNW8000	3,635.52	31.62	1,350.43	6,910.06	18,830.10	5.53
COW3000	732.98	10.20	339.67	936.33	5,574.01	4.33
COW11500	3,317.44	33.96	844.23	2,610.34	20,127.64	2.99

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

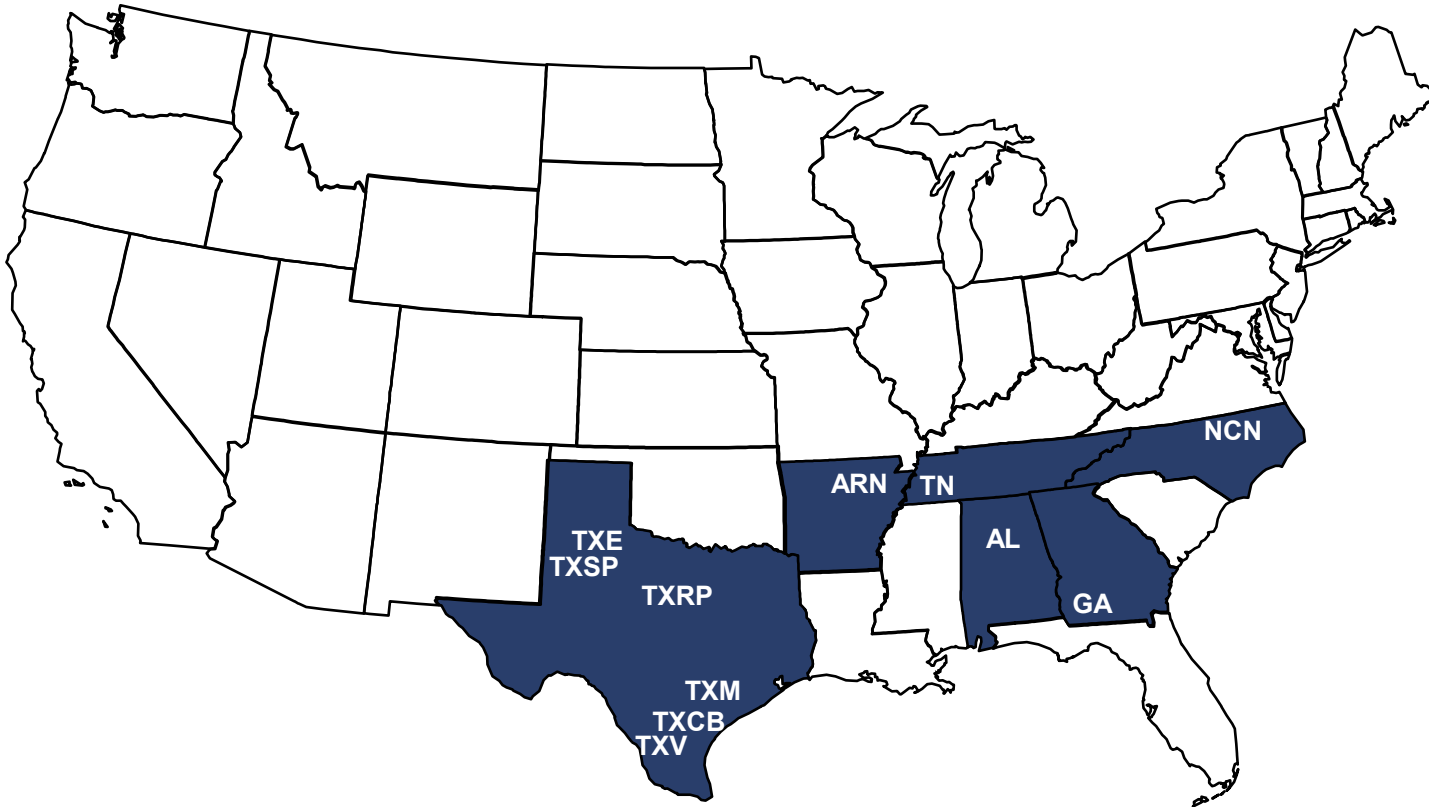
4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

Representative Farm: Cotton

- Six of the thirteen cotton farms are characterized in good overall financial condition over the 2023-2028 projection period, four are in marginal condition, and three are in poor condition.
- Six representative cotton farms are projected to experience significant cash flow problems (having a greater than 25 percent chance of a cash flow deficit); these six farms along with one additional farm are expected to face a 25 percent or greater chance of losing real equity over the period.



Characteristics of Panel Farms Producing Cotton, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cotton (acres)
TXSP4500	4,500	3,953.00	0.16	2,658.60	4,380
TXEC5000	5,000	5,785.00	0.10	2,907.50	4,700
TXRP3000	3,000	2,224.00	0.23	906.60	1,800
TXMC3000	3,000	4,737.00	0.17	2,493.20	1,500
TXCB4000	4,000	5,572.00	0.17	2,945.20	2,000
TXCB10000	10,000	14,833.00	0.14	7,582.90	5,000
TXVC6000	6,000	10,966.00	0.16	5,033.60	2,620
ARNC5000	5,000	17,309.00	0.18	5,705.80	2,500
TNC3000	3,000	5,675.00	0.13	2,743.30	825
TNC4000	4,000	7,884.00	0.13	3,598.60	1,000
ALC3500	3,500	9,112.00	0.15	3,845.50	1,050
GAC2500	1,250	12,236.00	0.14	3,971.00	1,250
NCNP1600	1,600	4,473.00	0.14	1,485.40	640

Representative Farm: Cotton

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
6/4/3				
TXSP4500			13-60	59-69
TXEC5000			4-21	36-33
TXRP3000			45-92	47-75
TXMC3000			12-37	42-41
TXCB4000			5-28	18-28
TXCB10000			1-1	2-1
TXVC6000			1-34	4-34
ARNC5000			1-1	1-1
TNC3000			1-1	1-1
TNC4000			1-10	10-20
ALC3500			1-1	1-1
GAC2500			1-1	1-1
NCNP1600			45-98	75-94

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Cotton

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
TXSP4500	2,412.98	40.39	179.94	(295.73)	2,761.01	(3.48)
TXEC5000	2,614.99	66.19	337.37	1,326.48	5,573.20	0.62
TXRP3000	795.87	14.95	1.01	(857.77)	1,281.70	(5.25)
TXMC3000	2,078.03	36.97	271.81	383.76	4,197.84	0.51
TXCB4000	2,467.21	34.58	213.17	685.94	4,812.58	0.08
TXCB10000	6,407.21	105.89	1,009.51	6,231.22	16,323.91	3.66
TXVC6000	4,139.65	70.87	204.73	611.63	9,285.45	(0.32)
ARNC5000	5,004.35	92.25	1,072.60	3,982.33	17,889.32	3.38
TNC3000	2,361.34	46.70	561.49	3,090.40	7,039.56	5.49
TNC4000	3,041.97	67.86	358.93	1,157.48	7,366.04	0.76
ALC3500	3,259.03	52.26	871.64	5,110.94	10,835.96	5.24
GAC2500	3,575.39	116.88	546.54	2,183.30	12,721.30	2.78
NCNP1600	1,334.19	42.54	32.86	(1,105.29)	3,277.07	(3.19)

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

Representative Farm: Rice

- Four of the fifteen representative rice farms are projected to be in good overall financial condition, two are in marginal condition, and nine are in poor overall financial health.
- Ten of the rice farms are expected to face severe cash flow problems; ten farms also are projected to face a 25 percent or greater chance of declining real net worth.



Characteristics of Panel Farms Producing Rice, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Rice (acres)
CAR1200	1,200	6,634.00	0.13	2,514.40	1,200
CAR3000	3,000	18,697.00	0.20	6,602.90	3,000
CABR800	800	6,783.00	0.21	1,797.00	800
CACR800	800	5,416.00	0.21	620.70	1
TXR1500	1,500	3,190.00	0.19	1,325.00	600
TXR3000	3,000	2,425.00	0.16	3,239.20	1,500
TXBR1800	1,800	1,415.00	0.12	2,387.90	900
TXER2500	2,500	1,095.00	0.41	2,195.80	1,000
LASR2000	2,000	2,536.00	0.17	1,602.00	1,000
ARMR6500	6,500	14,249.00	0.13	7,408.50	650
ARSR3240	3,240	7,754.00	0.16	3,643.60	1,458
ARWR2500	2,500	12,498.00	0.16	2,874.40	833
ARHR4000	4,000	11,391.00	0.17	4,577.50	2,640
MSDR5000	5,000	25,497.00	0.17	5,228.10	1,667
MOBR4000	4,000	12,961.00	0.17	3,594.40	1,320

Representative Farm: Rice

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
4/2/9				
CAR1200			18-80	55-52
CAR3000			97-99	97-99
CABR800			96-99	90-94
CACR800			99-99	99-99
TXR1500			87-78	77-52
TXR3000			24-22	68-33
TXBR1800			13-7	39-13
TXER2500			92-83	99-91
LASR2000			58-52	99-82
ARMR6500			1-1	1-1
ARSR3240			2-5	11-3
ARWR2500			12-73	13-25
ARHR4000			37-80	66-63
MSDR5000			1-1	1-1
MOBR4000			3-31	6-7

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(Negative Ending Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Rice

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
CAR1200	2,293.26	66.60	188.33	(517.93)	5,994.16	0.13
CAR3000	5,957.39	134.62	(277.74)	(6,505.72)	11,908.05	(4.25)
CABR800	1,642.19	56.40	105.89	(1,396.43)	5,087.15	(1.33)
CACR800	1,461.21	43.74	(268.46)	(3,326.74)	2,191.09	(10.84)
TXR1500	1,168.13	22.13	197.03	(400.48)	2,846.58	1.05
TXR3000	2,830.46	35.77	438.19	763.52	2,661.02	4.27
TXBR1800	2,121.51	22.70	338.89	993.77	1,967.24	7.51
TXER2500	2,512.44	33.42	155.43	(911.46)	315.28	(10.96)
LASR2000	1,704.93	24.23	224.65	(65.11)	2,300.11	1.03
ARMR6500	6,121.65	90.53	1,078.58	6,077.37	16,072.30	3.99
ARSR3240	3,115.64	44.60	525.46	1,880.09	8,178.89	3.29
ARWR2500	2,351.07	33.05	256.01	(581.32)	11,242.18	0.67
ARHR4000	3,951.94	54.43	358.77	(1,218.20)	9,415.08	(0.58)
MSDR5000	4,505.30	61.07	1,345.47	3,693.19	26,907.53	3.52
MOBR4000	2,962.14	32.76	389.46	505.76	12,019.41	1.30

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

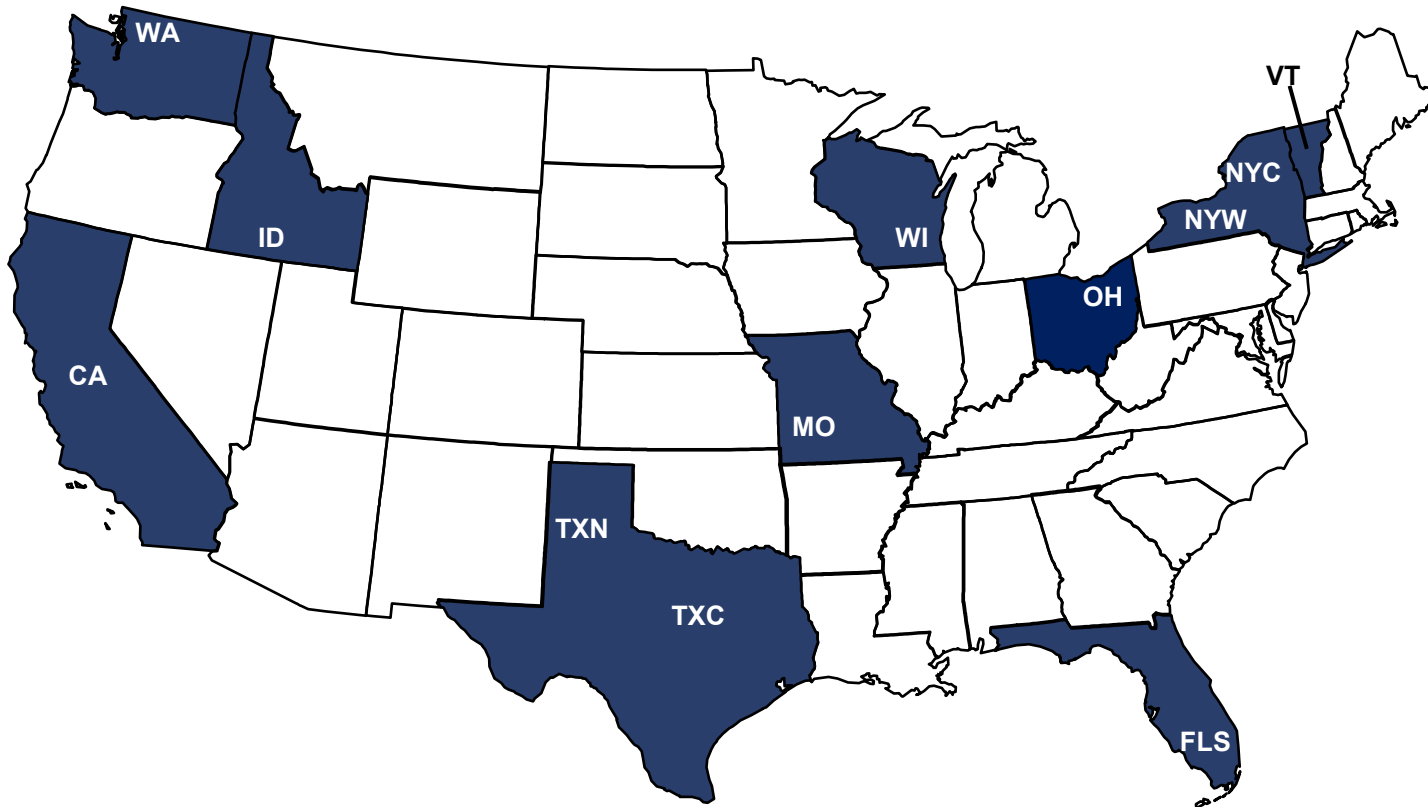
4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

Representative Farm: Dairy

- Nine of the 17 dairy operations are in good overall financial condition, two of the dairies are classified in marginal condition, and six dairies are in poor condition.
- Eight of the dairies are projected to experience severe cash flow stress; seven of these operations are also expected to face a greater than 25 percent chance of losing real net worth by 2028.



Characteristics of Panel Farms Producing Milk, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cows (number)
CAD2000	700	26,714.00	0.34	15,284.40	2,000
WAD300	250	5,248.00	0.26	1,925.40	300
WAD1200	850	19,517.00	0.17	9,420.40	1,200
IDD1500	850	11,363.00	0.18	11,691.70	1,500
TXND3800	1,920	24,950.00	0.17	24,673.90	3,800
TXCD1500	616	11,636.00	0.27	9,385.30	1,500
WID180	800	6,445.00	0.19	1,793.10	180
WID1700	3,200	28,164.00	0.19	12,944.70	1,700
OHD400	800	9,262.00	0.20	3,101.80	400
NYWD400	800	6,619.00	0.18	2,981.30	400
NYWD1200	2,100	21,858.00	0.19	9,068.20	1,200
NYCD180	400	3,420.00	0.18	1,494.30	180
NYCD800	1,800	16,275.00	0.17	6,186.90	800
VTD160	220	2,188.00	0.32	1,036.60	160
VTD400	1,000	6,949.00	0.20	3,457.00	400
MOGD550	460	4,626.00	0.16	2,173.10	550
FLSD2400	600	13,696.00	0.21	16,849.00	2,400

Representative Farm: Dairy

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
9/2/6				
CAD2000			99-99	99-99
WAD300			97-99	43-77
WAD1200			1-1	1-1
IDD1500			26-35	58-41
TXND3800			48-49	79-56
TXCD1500			95-99	94-95
WID180			1-1	1-1
WID1700			1-5	1-2
OHD400			6-16	1-1
NYWD400			1-1	1-1
NYWD1200			1-1	1-1
NYCD180			1-1	1-1
NYCD800			1-1	1-1
VTD160			99-99	98-99
VTD400			47-97	35-73
MOGD550			1-1	1-1
FLSD2400			31-37	21-24

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
CAD2000	12,166.79	57.69	(1,207.95)	16,061.16	10,031.62	(9.27)
WAD300	1,533.39	27.73	17.06	(1,219.74)	3,688.42	(1.32)
WAD1200	7,614.70	36.91	1,229.85	5,013.87	21,861.34	4.52
IDD1500	9,732.64	48.67	642.85	844.66	10,771.28	2.04
TXND3800	20,248.86	65.80	1,022.77	(55.97)	23,170.92	1.41
TXCD1500	7,671.07	33.19	(174.91)	(4,957.39)	6,191.62	(5.59)
WID180	1,537.92	29.09	342.16	890.92	6,434.53	3.08
WID1700	11,154.78	86.40	1,511.49	5,305.45	28,982.87	3.60
OHD400	2,634.19	33.32	404.76	642.61	8,976.87	2.85
NYWD400	2,492.99	33.93	513.56	1,824.34	7,365.98	4.75
NYWD1200	7,524.08	45.57	1,502.64	5,430.87	23,343.48	4.22
NYCD180	1,266.86	24.12	246.86	698.68	3,641.56	3.91
NYCD800	5,124.46	38.65	1,123.81	4,697.21	18,526.52	4.82
VTD160	875.06	17.15	(73.68)	(1,430.25)	740.17	(11.06)
VTD400	2,862.23	33.65	93.71	(1,171.77)	5,299.19	(1.29)
MOGD550	1,819.81	24.25	428.01	1,906.50	5,463.07	5.32
FLSD2400	14,391.02	50.85	854.64	1,052.46	13,228.85	3.01

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

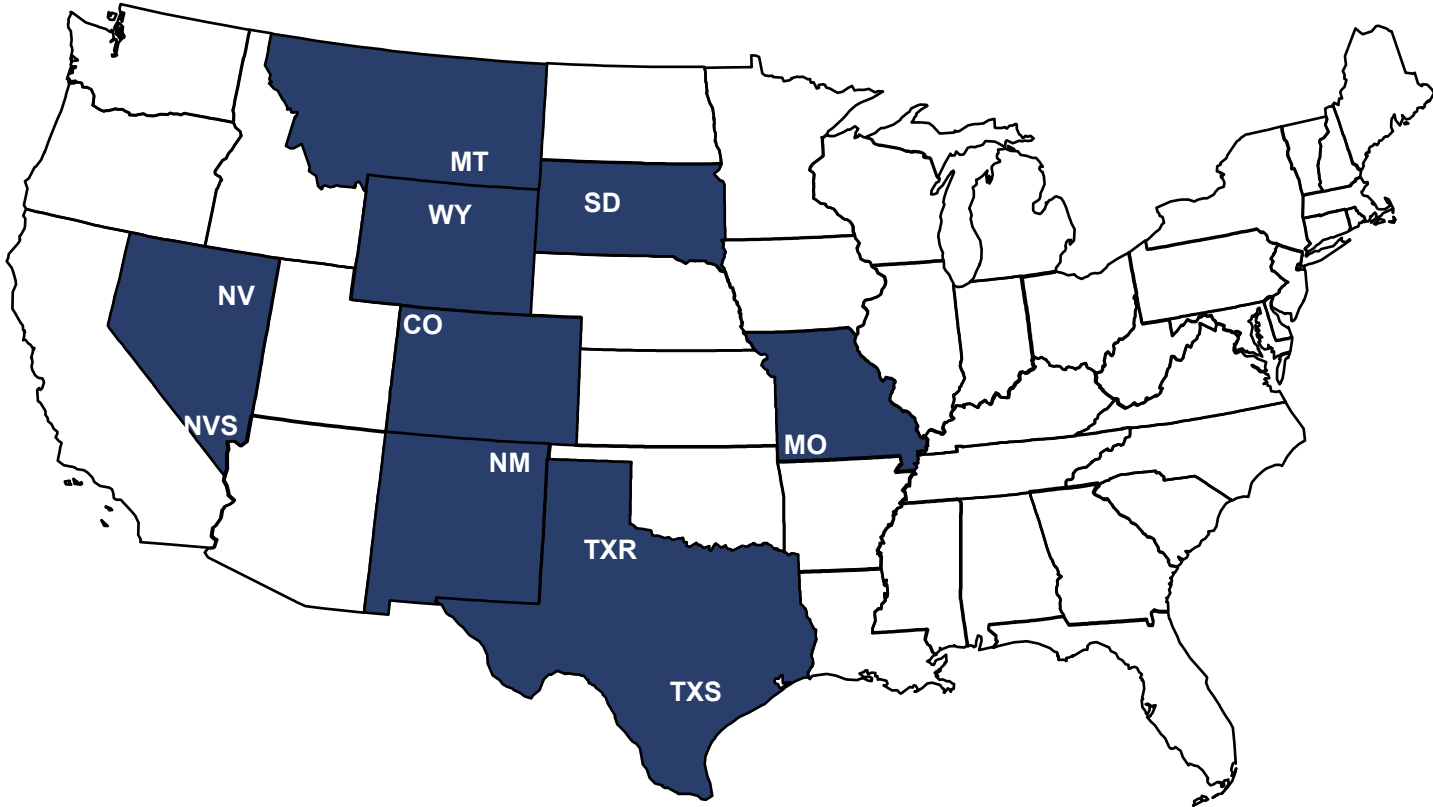
4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

Representative Farm: Cow/Calf

- Five of the ten cow-calf operations are projected to be in good overall financial condition, two of the ranches are in marginal condition, and three are in poor condition.
- Three ranches face the threat of moderate to severe cash flow stress; these three ranches along with two additional ones face serious risks (defined as a greater than 25 percent chance) of losing real wealth.



Characteristics of Panel Farms Producing Beef Cattle, 2022.

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cows (number)
NVB650	1,300	11,036.00	0.01	660.70	650
NVSB550	125	3,650.00	0.04	585.80	550
MTB600	900	8,930.00	0.01	546.20	480
WYB475	330	2,749.00	0.04	527.10	475
COB250	650	15,336.00	0.01	376.30	250
NMB210	0	7,315.00	0.02	237.00	210
SDB600	1,000	9,519.00	0.06	683.20	600
MOB250	450	4,457.00	0.02	631.30	250
TXRB400	0	11,588.00	0.01	499.90	400
TXSB300	100	9,153.00	0.01	448.80	300

Representative Farm: Cow/Calf

Economic Viability of Representative Farms over the 2023-2028 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2023	2028	2023-2028	2023-2028
5/2/3				
NVB650			9-5	99-47
NVSB550			60-1	95-5
MTB600			1-1	99-1
WYB475			70-93	99-97
COB250			24-16	99-99
NMB210			99-27	99-99
SDB600			99-99	97-73
MOB250			1-1	1-1
TXRB400			4-1	4-1
TXSB300			1-1	99-1

1 Viability is classified as good (green), moderate (yellow), and poor (red) based on the probabilities:

<25

25-50

>50

2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2023 and 2028.

3 P(Real Net Worth Decline) is the probability that the farm will have a loss in real net worth relative to the beginning net worth. Reported values represent the probabilities for losing real net worth from 2020 to 2023 and from 2020 to 2028.

Implications of the 2023 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Beef Cattle

	Receipts	Payments	NCFI	Reserve 2028	Net Worth 2028	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
NVB650	731.27	0.00	172.78	222.05	12,244.73	1.45
NVSB550	658.75	0.00	166.45	260.59	4,218.29	2.58
MTB600	683.96	0.00	332.37	1,180.84	10,745.23	2.87
WYB475	554.71	0.00	77.16	(211.81)	2,789.71	0.42
COB250	390.77	0.00	136.74	149.72	16,784.79	1.24
NMB210	274.81	0.00	104.27	25.14	8,008.76	1.32
SDB600	804.48	0.00	116.85	(692.91)	9,610.45	0.77
MOB250	600.16	2.50	241.46	739.52	5,267.70	2.70
TXRB400	586.78	0.00	188.32	485.55	13,168.24	1.80
TXSB300	423.50	0.00	176.11	463.91	10,119.70	1.36

1 Receipts are average annual total cash receipts including government payments, 2023-2028 (\$1,000)

2 Payments are average annual total government payments, 2023-2028 (\$1,000)

3 NCFI is average annual net cash farm income, 2023-2028 (\$1,000)

4 Reserve 2028 is average ending cash reserves, 2028 (\$1,000)

5 Net Worth 2028 is average nominal ending net worth, 2028 (\$1,000)

6 CRNW is average percentage change in real net worth over 2023-2028 period, (%)

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