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# ***Representative Farms Economic Outlook for the December 2017 FAPRI/AFPC Baseline***

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**Briefing Paper 17-3**

**December 2017**



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**REPRESENTATIVE FARMS ECONOMIC  
OUTLOOK FOR THE DECEMBER 2017  
FAPRI/AFPC BASELINE**

AFPC Briefing Paper 17-3

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## EXECUTIVE SUMMARY

The Agricultural and Food Policy Center (AFPC) at Texas A&M University develops and maintains data to simulate 94 representative crop, dairy, and livestock operations in major production areas in 29 states. The chief purpose of this analysis is to project the economic viability of those farms by region and commodity for 2017 through 2022. The data necessary to simulate the economic activity of these operations is developed through ongoing cooperation with panels of agricultural producers in selected states. The Food and Agricultural Policy Research Institute (FAPRI) provided projected prices, policy variables, and input inflation rates in their preliminary baseline.

Under the December 2017 Baseline, 18 of the 63 crop farms are considered in good liquidity condition (less than a 25 percent chance of negative ending cash by 2022). Eight crop farms have between a 25 percent and a 50 percent likelihood of negative ending cash, and the remaining 37 crop farms have greater than a 50 percent chance of negative ending cash. Additionally, 34 of the 63 crop farms are considered in good equity position (less than a 25 percent chance of decreasing real net worth during the study period). Nine crop farms have between a 25 percent and 50 percent likelihood of losing real net worth, and 20 crop farms have greater than a 50 percent probability of decreasing real net worth by 2022. The following discussion provides an overall evaluation by commodity considering both liquidity and equity measures.

- **FEEDGRAIN FARMS:** Nine of the 23 feedgrain farms are in good overall financial condition. Five farms are classified in marginal condition, and nine are in poor condition.
- **WHEAT FARMS:** Four representative wheat farms are classified in good overall financial condition, three are in marginal condition, and four are in poor condition.
- **COTTON FARMS:** Five of the 14 cotton farms are classified in good condition, three are in marginal condition, and six are in poor condition.
- **RICE FARMS:** None of the 15 rice farms are projected to be in good financial condition. Six rice farms are projected to be in marginal condition; nine are in poor condition.
- **DAIRY FARMS:** Eleven of the 20 dairies are in good overall financial condition. Two dairies are classified in marginal condition, and seven are in poor condition.
- **BEEF CATTLE RANCHES:** One of the 11 cattle ranches is classified in good financial condition, two are in marginal condition, and eight are projected to be in poor condition.

## REPRESENTATIVE FARMS ECONOMIC OUTLOOK FOR THE DECEMBER 2017 FAPRI/AFPC BASELINE

The farm level economic impacts of the FAPRI December 2017 Baseline on representative crop and livestock operations are projected in this report, assuming provisions of the 2014 Farm Bill continue throughout the 2016-2022 study period. Crop farms are assumed to have elected ARC-CO or PLC for program crops based on the prevailing elections made by panel members on each of our representative farms. These interviews also led to the assumption that the farms are currently not purchasing SCO or STAX. The analysis was conducted over the 2016-2022 planning horizon using whole farm simulation models developed by AFPC. Data to simulate farming operations in the nation's major production regions came from two sources:

- Producer panel cooperation to develop economic information to describe and simulate representative crop, livestock, and dairy farms.
- Projected prices, policy variables, and input inflation rates from the Food and Agricultural Policy Research Institute (FAPRI) December 2017 Baseline.

The simulations incorporate historical risk faced by farmers for prices and production. This report presents the results of the December 2017 Baseline in a risk context using selected simulated probabilities and ranges for annual net cash farm income values. 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 2022.

### DEFINITIONS OF VARIABLES IN THE SUMMARY TABLES

- **Overall Financial Position, 2017-2022** -- As a means of summarizing the representative farms' economic efficiency, liquidity, and solvency position, AFPC classifies each farm as being in either 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 2022. If the probabilities of these events are between 25 and 50 percent the farm is classified as marginal. A probability greater than 50 percent places the farm in a poor financial position.
- **Receipts** -- 2017-2022 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** -- 2017-2022 average annual PLC or ARC payments and marketing loan gains/LDPs for crop farms.
- **NCFI** -- 2017-2022 average net cash farm income equals average total receipts minus average total cash expenses.
- **Reserve 2022** -- equals total cash on hand at the end of year 2022. 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 2022** -- equity equals total assets including land minus total debt from all sources and is reported at the end of 2022.
- **CRNW** -- annualized percentage change in the operator's real net worth from December 1, 2017 through December 31, 2022, after adjusting for inflation.

**Table 1. FAPRI December 2017 Baseline Projections of Crop and Livestock Prices, 2016-2022.**

	2016	2017	2018	2019	2020	2021	2022
<b>Crop Prices</b>							
Corn (\$/bu.)	3.36	3.20	3.55	3.84	3.80	3.78	3.73
Wheat (\$/bu.)	3.89	4.65	4.87	4.89	5.01	5.06	5.02
Cotton (\$/lb.)	0.6800	0.6221	0.6276	0.6640	0.6685	0.6687	0.6781
Sorghum (\$/bu.)	2.79	3.07	3.30	3.48	3.44	3.42	3.38
Soybeans (\$/bu.)	9.47	9.30	9.56	9.97	9.88	9.73	9.51
Barley (\$/bu.)	4.96	4.41	4.95	5.01	4.97	4.94	4.91
Oats (\$/bu.)	2.06	2.47	2.49	2.62	2.63	2.64	2.62
Rice (\$/cwt.)	10.40	12.55	11.69	11.65	11.76	11.90	12.17
Soybean Meal (\$/ton)	302.24	296.83	304.31	325.27	324.34	321.84	314.30
All Hay (\$/ton)	129.00	138.54	150.01	158.26	159.96	159.23	158.38
Peanuts (\$/ton)	394.00	420.31	358.97	360.32	364.75	368.88	372.10
<b>Cattle Prices</b>							
Feeder Cattle (\$/cwt)	153.44	154.68	142.26	133.95	137.69	148.00	157.72
Fed Cattle (\$/cwt)	120.86	121.34	113.08	107.60	109.67	114.07	118.98
Culled Cows (\$/cwt)	71.45	67.40	63.47	59.84	61.75	65.48	69.62
<b>Milk Price</b>							
U.S. All Milk Price (\$/cwt)	16.34	17.73	16.95	17.34	18.15	18.53	18.64

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

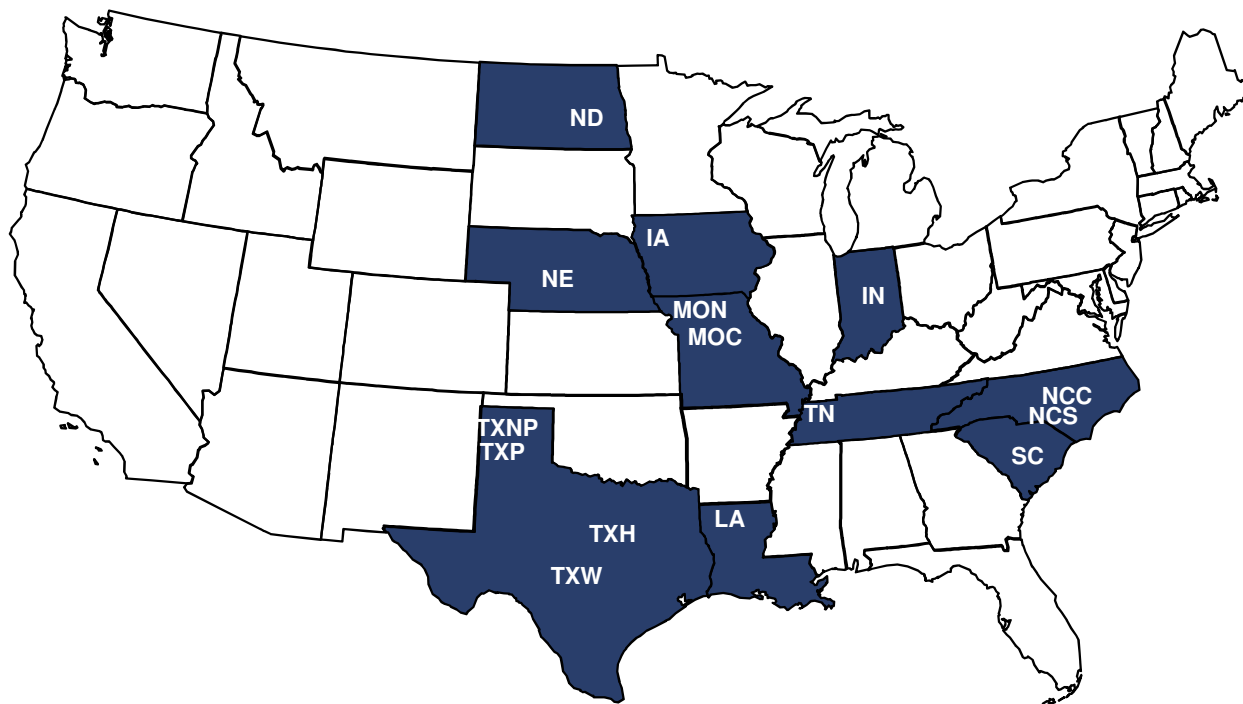
**Table 2. FAPRI December 2017 Baseline Assumed Rates of Change in Input Prices and Annual Changes in Land Values, 2017-2022.**

	2017	2018	2019	2020	2021	2022
<b>Annual Rate of Change for Input Prices Paid</b>						
Seed Prices (%)	-0.81	-0.12	0.18	1.57	1.84	1.40
All Fertilizer Prices (%)	-5.96	1.70	0.71	5.17	1.54	0.21
Herbicide Prices (%)	-0.15	0.70	3.26	5.09	3.82	3.24
Insecticide Prices (%)	-1.18	0.44	2.47	4.30	3.01	2.30
Fuel and Lube Prices (%)	17.52	-1.99	7.37	11.50	7.03	6.16
Machinery Prices (%)	2.04	2.26	2.72	3.65	2.98	2.58
Wages (%)	2.37	2.82	3.11	3.24	3.26	3.36
Supplies (%)	1.08	1.71	1.57	1.75	1.72	1.68
Repairs (%)	1.75	2.30	2.32	2.50	2.43	2.48
Services (%)	2.84	2.53	2.86	3.20	3.02	2.96
Taxes (%)	0.00	2.42	3.50	1.58	0.44	1.29
PPI Items (%)	0.95	-0.43	2.04	2.85	2.41	2.06
PPI Total (%)	1.26	0.13	2.35	2.86	2.39	2.14
<b>Annual Change in Consumer Price Index (%)</b>						
	2.07	1.75	2.22	2.67	2.44	2.40
<b>Annual Rate of Change for U.S. Land Prices (%)</b>						
	-0.48	-1.43	-3.36	-2.00	-0.05	0.34

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

# Representative Farm: Feed Grains

- Overall, nine feed grain farms are characterized as good, five are marginal, and nine are in poor condition.
- Eleven of the twenty-three farms will be under severe cash flow stress; seven of these farms also have high likelihoods (greater than a 50 percent chance) of losing real net worth.



**Characteristics of Panel Farms Producing Feed Grains, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Feed Grains (acres)
IAG1350	1,350	3,364.00	0.28	832.10	1,350
IAG3400	3,400	11,533.00	0.23	1,844.40	3,400
NEG2400	2,400	5,433.00	0.23	1,909.60	2,400
NEG4300	4,300	18,185.00	0.24	3,151.70	4,000
NDG3000	3,000	3,550.00	0.25	1,101.40	2,500
NDG8000	8,000	22,301.00	0.24	3,147.40	6,000
ING1000	1,000	2,568.00	0.20	616.30	1,000
ING3250	3,250	9,427.00	0.21	2,169.20	3,250
MOCG2300	2,300	11,494.00	0.21	1,122.90	2,300
MOCG4200	4,200	14,701.00	0.21	2,078.20	4,200
MONG2300	2,300	10,503.00	0.21	1,642.10	2,250
LANG2500	2,500	3,282.00	0.30	1,545.00	1,625
TNG2500	2,500	3,032.00	0.22	1,239.00	2,500
TNG4500	4,500	8,333.00	0.22	2,954.60	3,375
NCSP2000	2,000	3,968.00	0.21	1,507.90	1,600
NCC2030	2,030	2,043.00	0.16	1,215.00	1,700
SCC2000	2,000	3,090.00	0.22	1,501.80	1,250
SCG3500	3,500	5,727.00	0.24	2,682.30	1,800
TXNP3450	3,450	7,418.00	0.20	1,970.40	1,775
TXNP10640	10,640	12,891.00	0.19	6,537.40	6,105
TXPG2500	2,500	5,212.00	0.22	1,877.30	1,183
TXHG2700	2,700	1,680.00	0.34	576.60	1,700
TXWG1600	1,600	1,404.00	0.27	415.40	1,100



# Representative Farm: Feed Grains

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
9/5/9				
IAG1350			96-98	78-93
IAG3400			83-77	32-14
NEG2400			49-59	38-33
NEG4300			90-92	48-58
NDG3000			83-81	40-50
NDG8000			45-29	1-1
ING1000			33-23	24-5
ING3250			34-28	24-5
MOCG2300			55-43	18-1
MOCG4200			17-5	9-1
MONG2300			17-17	3-1
LANG2500			92-96	35-76
TNG2500			47-57	32-29
TNG4500			24-17	12-3
NCSP2000			86-99	65-92
NCC2030			1-1	1-1
SCC2000			2-4	3-1
SCG3500			15-9	9-2
TXNP3450			5-2	1-1
TXNP10640			3-2	4-1
TXPG2500			27-62	10-20
TXHG2700			98-92	53-69
TXWG1600			97-98	46-58

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

<25	25-50	>50
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2 P(Negative Ending Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Feed Grains and Oilseeds

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
IAG1350	917.82	27.42	(6.24)	(1,227.12)	1,386.73	(8.78)
IAG3400	2,029.19	61.47	435.49	(792.21)	9,049.08	0.34
NEG2400	2,003.50	50.59	283.15	(311.74)	4,200.52	0.14
NEG4300	3,340.31	82.36	217.65	(2,851.75)	12,038.28	(2.29)
NDG3000	1,166.39	46.78	179.10	(588.81)	2,371.43	(1.88)
NDG8000	3,444.58	99.69	861.90	1,025.44	19,580.84	2.44
ING1000	627.59	16.86	209.53	159.84	2,259.14	1.54
ING3250	2,202.20	54.33	493.51	424.13	8,003.89	1.22
MOCG2300	1,237.29	51.54	461.41	156.60	9,459.73	0.71
MOCG4200	2,170.36	40.57	912.46	1,692.81	13,376.90	2.39
MONG2300	1,588.68	60.03	541.47	451.09	9,211.57	1.73
LANG2500	1,717.15	124.16	61.66	(1,264.62)	1,506.80	(6.62)
TNG2500	1,267.64	38.03	220.55	(136.08)	2,468.33	0.79
TNG4500	2,981.39	81.21	638.39	1,036.42	8,048.75	3.57
NCSP2000	1,421.85	113.81	(13.59)	(1,718.00)	1,730.83	(9.31)
NCC2030	1,263.84	21.61	453.65	1,036.09	2,928.86	9.39
SCC2000	1,551.60	113.10	369.81	707.54	3,172.80	4.66
SCG3500	2,871.93	85.77	535.73	1,081.60	5,487.04	3.98
TXNP3450	2,147.77	130.44	695.45	1,495.47	7,967.70	4.94
TXNP10640	6,663.44	332.01	1,320.73	4,042.02	14,763.99	6.04
TXPG2500	1,801.42	81.61	258.61	(317.60)	4,277.11	0.95
TXHG2700	806.21	82.84	81.94	(605.25)	813.87	(4.91)
TXWG1600	585.81	49.54	72.32	(479.36)	877.32	(2.61)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

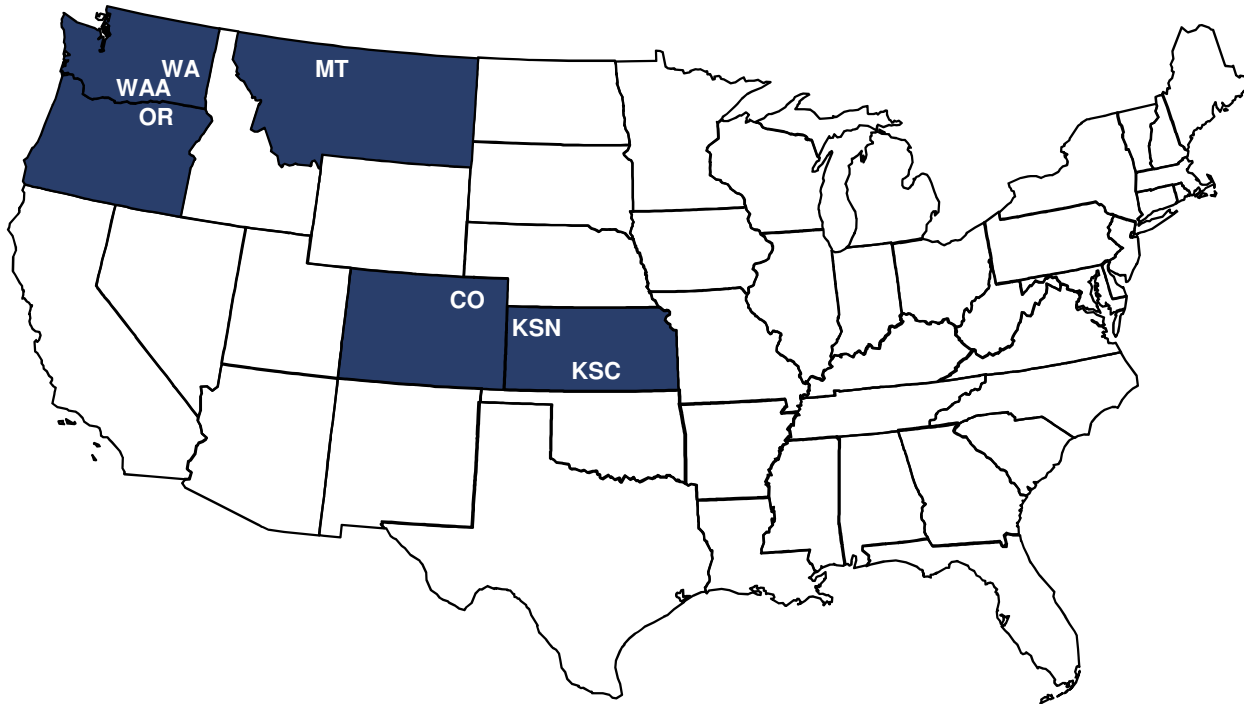
4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

# Representative Farm: Wheat

- Four wheat farms are projected to be in good overall financial condition, three are in marginal condition, and four are in poor condition.
- Six of the eleven wheat farms are expected to feel significant liquidity pressure over the period; three of those six farms also have a greater than 50 percent chance of losing wealth.



**Characteristics of Panel Farms Producing Wheat, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Wheat (acres)
WAW2000	2,000	1,994.00	0.18	700.00	1,320
WAW8000	8,000	10,563.00	0.21	2,947.80	4,950
WAAW5000	5,000	2,178.00	0.19	649.00	2,300
ORW4100	4,100	1,311.00	0.28	315.70	2,150
MTW8000	8,000	5,947.00	0.24	1,200.50	3,840
KSCW2000	2,000	2,500.00	0.16	1,032.80	800
KSCW5300	5,300	5,362.00	0.20	2,134.00	2,385
KSNW4000	4,000	3,660.00	0.19	798.00	1,200
KSNW7000	7,000	7,124.00	0.22	1,890.60	1,700
COW3000	3,000	3,670.00	0.22	299.10	1,013
COW6000	6,000	5,988.00	0.25	897.20	2,000

# Representative Farm: Wheat

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
4/3/4				
WAW2000			4-1	1-1
WAW8000			68-58	15-15
WAAW5000			56-92	42-77
ORW4100			99-99	52-80
MTW8000			2-1	1-1
KSCW2000			1-1	1-1
KSCW5300			1-1	3-1
KSNW4000			56-65	17-29
KSNW7000			45-44	22-20
COW3000			98-89	1-2
COW6000			99-99	55-94

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 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Wheat

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
WAW2000	793.87	40.55	298.06	623.50	2,286.91	5.87
WAW8000	3,433.88	196.37	633.51	(376.00)	9,080.57	1.53
WAAW5000	570.08	25.04	71.05	(510.79)	1,309.59	(4.84)
ORW4100	462.46	15.59	87.14	(634.16)	611.41	(6.96)
MTW8000	1,489.80	168.88	724.03	1,644.76	6,582.88	6.43
KSCW2000	894.54	23.03	319.50	831.35	2,721.94	4.51
KSCW5300	2,241.25	61.96	772.36	2,232.64	6,420.46	6.95
KSNW4000	834.61	48.91	186.87	(195.87)	2,904.42	(0.42)
KSNW7000	1,817.36	54.88	364.64	101.24	5,813.52	0.77
COW3000	390.53	32.19	126.60	(196.22)	2,855.61	(0.04)
COW6000	868.86	77.14	48.31	(1,650.48)	3,377.77	(4.73)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

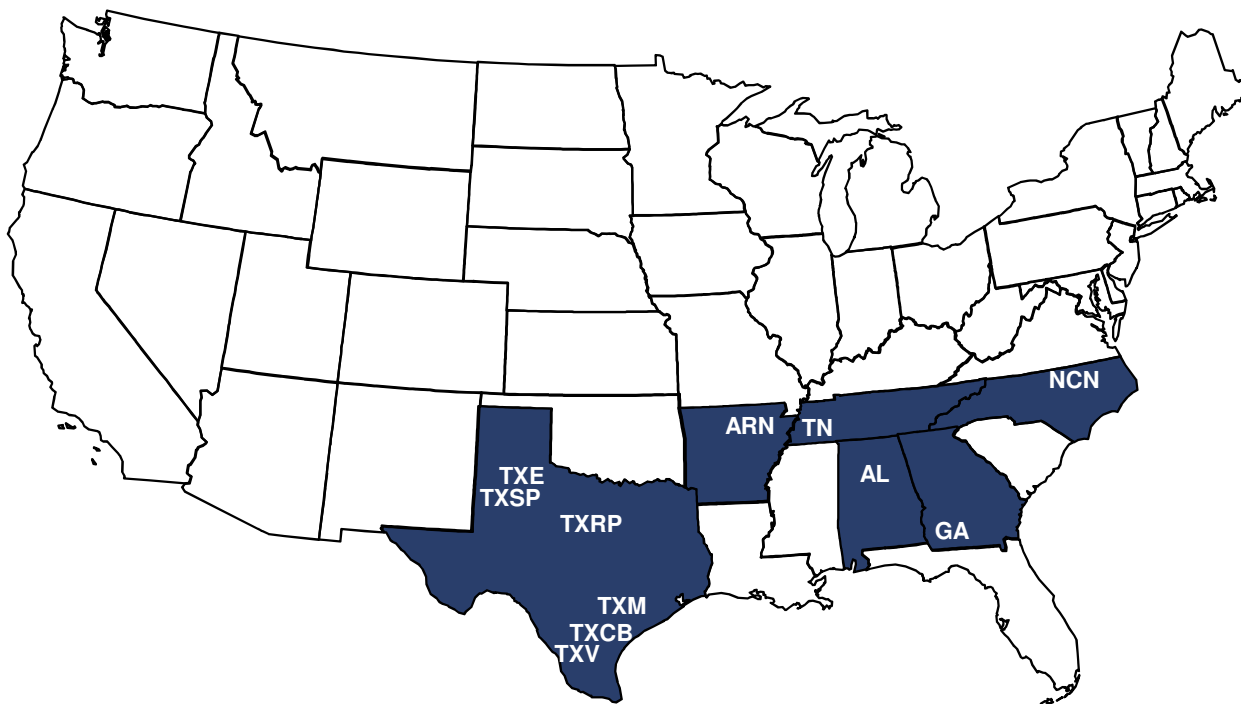
4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

# Representative Farm: Cotton

- Five of the fourteen cotton farms are characterized in good overall financial condition over the 2017-2022 period, three are in marginal condition, and six are in poor condition.
- Seven of the farms are projected to experience severe cash flow problems (having a greater than 50 percent chance of a cash flow deficit); three of those farms are also expected to have a greater than 50 percent chance of losing real equity over the period.



**Characteristics of Panel Farms Producing Cotton, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cotton (acres)
TXSP2500	2,500	1,235.00	0.17	892.00	1,298
TXSP4500	4,500	2,893.00	0.16	1,973.70	3,717
TXEC5000	5,000	3,455.00	0.17	2,276.60	4,400
TXRP2500	2,500	1,498.00	0.16	984.20	1,500
TXMC1800	1,800	1,514.00	0.38	864.10	756
TXCB3000	3,000	2,211.00	0.24	1,033.70	1,350
TXCB9200	9,200	4,914.00	0.34	3,539.50	3,680
TXVC5500	5,500	6,268.00	0.19	3,310.70	1,890
ARNC5000	5,000	9,317.00	0.20	3,997.40	2,500
TNC3000	3,000	1,924.00	0.17	1,887.20	825
TNC4050	4,050	5,826.00	0.20	2,655.30	1,500
ALC3500	3,500	3,934.00	0.25	2,429.90	1,050
GAC2500	2,500	9,162.00	0.20	3,270.90	1,250
NCNP1600	1,600	3,496.00	0.25	1,058.30	560

# Representative Farm: Cotton

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
5/3/6				
TXSP2500			4-51	12-9
TXSP4500			28-56	40-35
TXEC5000			28-38	49-30
TXRP2500			11-84	53-86
TXMC1800			96-99	77-95
TXCB3000			64-58	40-30
TXCB9200			73-73	42-48
TXVC5500			11-11	13-3
ARNC5000			6-6	4-1
TNC3000			4-3	15-2
TNC4050			28-27	21-12
ALC3500			4-1	6-1
GAC2500			1-1	1-1
NCNP1600			96-99	46-83

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 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Cotton

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
TXSP2500	854.04	169.83	182.74	(5.01)	1,282.25	3.76
TXSP4500	1,834.80	31.01	297.00	(183.01)	2,508.25	0.43
TXEC5000	2,126.09	62.81	370.63	378.81	3,200.09	1.90
TXRP2500	529.46	30.09	(8.42)	(352.82)	730.95	(8.56)
TXMC1800	903.72	75.64	(22.76)	(1,366.13)	(28.40)	(39.15)
TXCB3000	1,119.17	111.54	174.90	(128.36)	1,735.24	0.46
TXCB9200	3,822.36	373.13	287.85	(960.83)	3,014.50	(1.30)
TXVC5500	3,107.23	212.22	516.38	1,099.49	6,188.44	3.41
ARNC5000	4,065.49	229.05	1,000.46	2,031.75	9,814.12	4.80
TNC3000	1,816.10	45.96	388.51	1,078.37	2,538.32	8.04
TNC4050	2,591.16	120.10	431.60	452.76	5,164.77	1.74
ALC3500	2,536.02	82.99	665.69	1,766.43	4,802.10	8.36
GAC2500	3,157.43	506.61	800.02	2,123.70	9,450.92	4.34
NCNP1600	1,121.55	126.62	51.33	(1,212.02)	1,902.96	(5.18)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

# Representative Farm: Rice

- None of the fifteen representative rice farms are projected to be in good overall financial condition, six are in marginal condition, and nine are in poor condition.
- Thirteen of the rice farms are expected to face severe cash flow problems; seven of those farms also have high likelihoods of declining real net worth.



**Characteristics of Panel Farms Producing Rice, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Rice (acres)
CAR1200	1,200	3,400.00	0.22	1,356.40	1,200
CAR3000	3,000	12,901.00	0.26	3,764.60	3,000
CABR1000	1,000	5,431.00	0.23	1,248.10	1,000
CACR800	800	3,256.00	0.29	931.90	800
TXR1500	1,500	2,066.00	0.21	728.40	600
TXR3000	3,000	1,075.00	0.17	1,447.40	1,500
TXBR1800	1,800	769.00	0.31	883.50	600
TXER3200	3,200	2,440.00	0.26	1,187.30	1,067
LASR2000	2,000	1,710.00	0.35	1,378.80	1,000
ARMR6500	6,500	7,411.00	0.26	4,027.10	650
ARSR3240	3,240	4,762.00	0.25	1,969.70	1,458
ARWR2500	2,500	7,199.00	0.24	1,483.90	1,250
ARHR4000	4,000	6,537.00	0.21	2,430.90	2,400
MSDR5000	5,000	16,945.00	0.23	3,186.00	1,667
MOBR4000	4,000	9,294.00	0.27	2,095.30	1,320

# Representative Farm: Rice

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
0/6/9				
CAR1200			64-77	6-21
CAR3000			89-99	12-82
CABR1000			89-99	11-71
CACR800			99-99	34-99
TXR1500			13-40	7-2
TXR3000			20-63	12-15
TXBR1800			38-89	19-57
TXER3200			75-99	26-99
LASR2000			41-99	25-88
ARMR6500			53-56	24-28
ARSR3240			53-63	15-31
ARWR2500			86-98	6-15
ARHR4000			22-56	6-12
MSDR5000			26-36	4-2
MOBR4000			82-93	32-59

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

<25

25-50

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2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Rice

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
CAR1200	1,605.90	160.05	263.44	(220.49)	2,584.61	(0.47)
CAR3000	4,509.69	491.92	125.37	(3,579.14)	7,434.56	(4.03)
CABR1000	1,431.68	133.52	144.96	(1,067.66)	3,536.91	(2.60)
CACR800	1,134.34	110.38	(94.10)	(1,653.03)	928.48	(13.86)
TXR1500	868.06	122.32	214.66	48.46	1,918.03	2.73
TXR3000	1,735.94	200.38	310.02	(177.81)	1,350.82	7.54
TXBR1800	1,056.50	133.76	149.19	(302.24)	419.71	(3.50)
TXER3200	1,416.04	190.29	13.08	(1,444.21)	781.18	(12.52)
LASR2000	1,440.71	146.46	79.51	(707.35)	619.23	(8.80)
ARMR6500	4,727.17	270.75	558.87	(576.37)	5,948.70	1.41
ARSR3240	2,422.40	232.10	282.84	(372.60)	3,564.39	0.06
ARWR2500	1,710.39	180.36	271.74	(1,102.69)	5,417.59	(0.07)
ARHR4000	2,841.59	316.50	398.37	(129.61)	5,372.02	0.69
MSDR5000	3,492.10	223.08	903.86	399.31	14,371.09	1.59
MOBR4000	2,325.64	174.81	169.90	(1,558.68)	5,902.49	(2.28)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

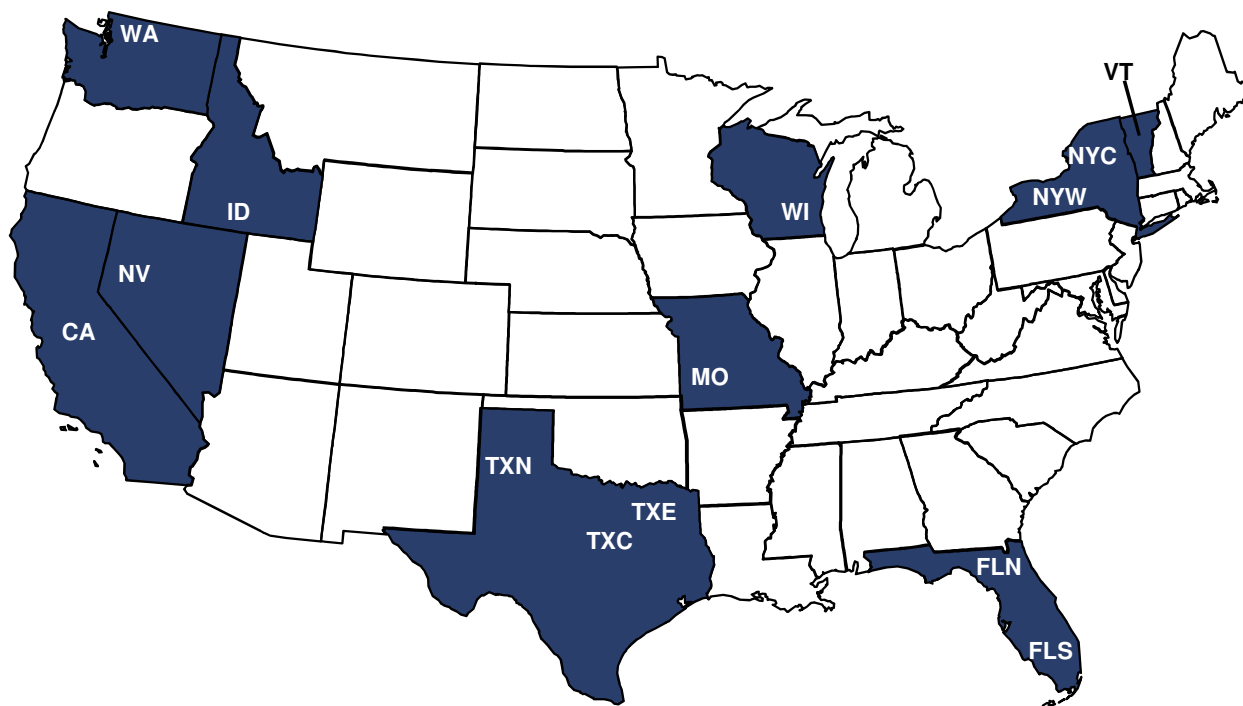
4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

# Representative Farm: Dairy

- Eleven of the twenty dairy operations are in good overall financial condition. Two dairies are classified in marginal condition, and seven are in poor condition.
- Seven of the dairies are projected to experience severe cash flow stress; additionally, these seven dairies are all projected to face a 45 percent or greater chance of losing real net worth by 2022.



**Characteristics of Panel Farms Producing Milk, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cows (number)
CAD2000	1,200	24,182.00	0.25	8,941.30	2,000
WAD300	250	4,412.00	0.31	1,143.70	300
WAD1200	850	15,014.00	0.27	5,681.30	1,200
IDD3000	1,500	30,207.00	0.24	13,989.20	3,000
NVD1000	500	7,437.00	0.24	4,369.10	1,000
TXND3800	1,920	26,468.00	0.26	16,692.30	3,800
TXCD1500	616	10,602.00	0.28	6,163.50	1,500
TXED400	950	2,778.00	0.33	1,145.10	400
WID145	600	3,503.00	0.30	766.90	145
WID1000	2,000	10,902.00	0.27	5,447.00	1,000
NYWD500	1,000	5,259.00	0.24	2,590.90	500
NYWD1200	2,100	14,152.00	0.27	5,846.30	1,200
NYCD180	400	3,812.00	0.29	791.40	180
NYCD675	1,500	11,903.00	0.25	3,142.00	675
VTD160	220	1,915.00	0.32	691.30	160
VTD400	1,000	5,909.00	0.27	2,163.60	400
MOGD550	0	3,312.00	0.25	1,029.00	550
MOGD400	0	2,244.00	0.24	997.60	400
FLND550	600	3,787.00	0.27	2,543.40	550
FLSD1750	400	11,551.00	0.25	7,857.10	1,750



# Representative Farm: Dairy

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
11/2/7				
CAD2000			1-3	1-1
WAD300			99-99	99-90
WAD1200			1-9	99-21
IDD3000			1-17	1-10
NVD1000			1-10	1-7
TXND3800			1-40	1-17
TXCD1500			99-79	1-63
TXED400			99-99	99-91
WID145			99-44	1-13
WID1000			1-5	1-2
NYWD500			1-1	1-1
NYWD1200			1-7	1-4
NYCD180			99-79	1-45
NYCD675			1-12	1-2
VTD160			99-99	99-98
VTD400			1-38	1-19
MOGD550			1-21	1-13
MOGD400			1-2	1-1
FLND550			1-87	1-74
FLSD1750			99-84	1-75

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

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25-50

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2 P(NegativeEnding Cash) is the probability that the farm will have a cash flow deficit. Reported values represent the probabilities for 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Milk

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
CAD2000	10,683.55	43.81	2,379.73	6,373.10	25,594.61	5.29
WAD300	1,326.00	2.42	43.53	(1,247.56)	2,370.56	(3.79)
WAD1200	6,471.67	9.42	1,320.04	3,045.72	12,460.38	5.51
IDD3000	16,057.76	11.43	2,581.90	5,326.67	30,536.70	3.84
NVD1000	4,942.91	0.00	865.11	2,212.29	8,173.16	5.34
TXND3800	18,379.07	56.19	2,268.16	926.31	24,565.59	2.37
TXCD1500	6,871.03	0.00	251.57	(2,149.54)	6,570.69	(2.85)
TXED400	1,255.54	0.00	(1.59)	(1,262.63)	1,098.21	(6.58)
WID145	862.36	2.02	207.65	38.56	2,766.10	1.14
WID1000	6,106.47	33.54	1,238.98	3,302.19	11,801.35	5.99
NYWD500	2,874.97	11.85	760.05	2,551.50	6,564.25	7.23
NYWD1200	6,513.44	19.70	1,215.93	2,900.25	13,789.67	3.56
NYCD180	881.59	6.81	167.06	(220.93)	2,761.59	(0.63)
NYCD675	3,512.43	22.20	840.51	1,236.72	11,204.31	2.64
VTD160	756.61	0.29	(10.58)	(853.53)	742.43	(7.24)
VTD400	2,393.38	1.29	355.57	154.79	4,875.92	0.91
MOGD550	1,131.33	0.00	284.43	290.11	2,914.58	2.01
MOGD400	1,102.12	0.00	327.00	706.69	2,507.51	5.72
FLND550	2,563.65	0.00	43.66	(1,168.18)	1,916.34	(5.80)
FLSD1750	7,938.72	0.00	(73.96)	(3,578.60)	6,005.40	(5.80)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

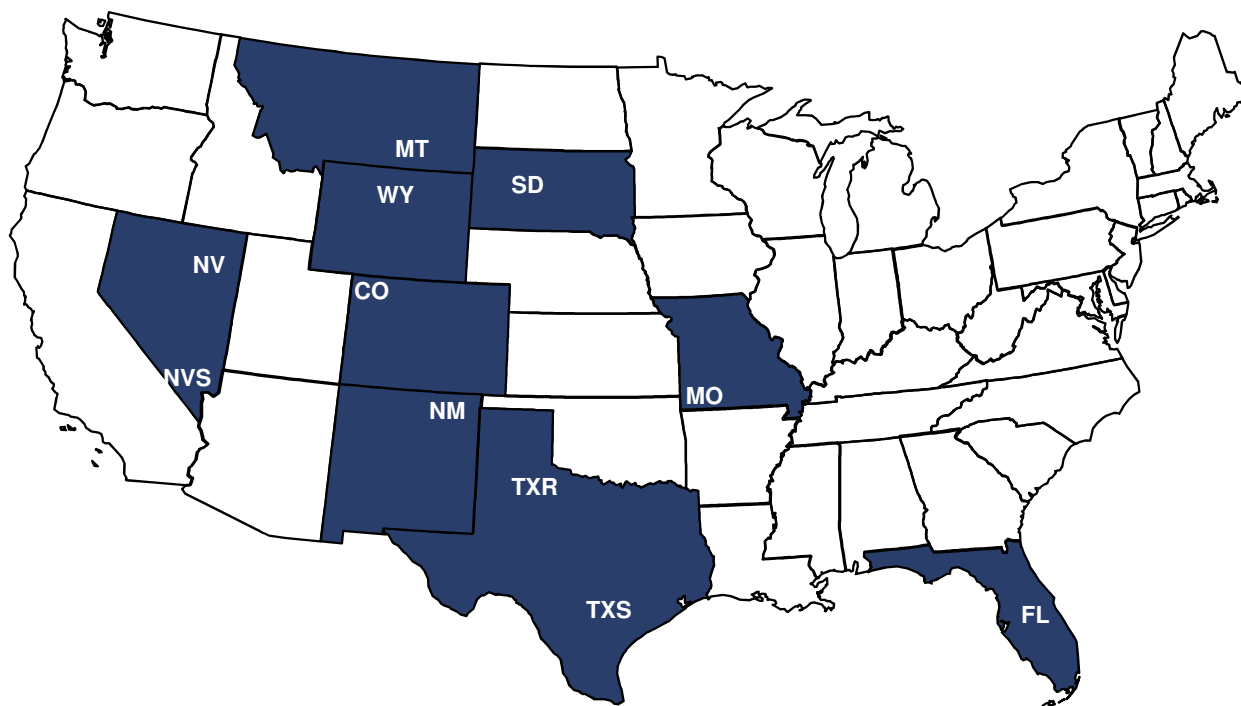
4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

# Representative Farm: Cow/Calf

- One of eleven cow-calf operations is projected to be in good overall financial condition, two are in marginal condition, and eight are in poor condition.
- Although only seven ranches face the threat of severe cash flow stress, all ranches except for NVSB550 face a significant chance of losing real equity.



**Characteristics of Panel Farms Producing Beef Cattle, 2016.**

	Cropland (acres)	Assets (\$1,000)	Debt/Asset (ratio)	Gross Receipts (\$1,000)	Cows (number)
NVB650	1,300	8,225.00	0.02	594.70	650
NVSB550	125	2,496.00	0.07	536.60	550
MTB600	0	8,024.00	0.02	454.00	600
WYB475	330	2,668.00	0.07	441.60	475
COB275	650	14,355.00	0.02	268.70	275
NMB240	0	7,144.00	0.02	251.80	240
SDB500	1,500	7,733.00	0.03	361.40	500
MOB250	280	3,067.00	0.03	354.90	250
TXRB400	0	8,426.00	0.01	463.20	400
TXSB275	0	5,084.00	0.02	252.80	275
FLB1155	5,400	24,647.00	0.01	846.30	1,155

# Representative Farm: Cow/Calf

## Economic Viability of Representative Farms over the 2017-2022 Period

Farm Name	Overall Ranking		P(Negative Ending Cash)	P(Real Net Worth Declines)
	2017	2022	2017-2022	2017-2022
1/2/8				
NVB650			1-30	1-76
NVSB550			1-1	1-11
MTB600			99-97	99-97
WYB475			99-99	99-99
COB275			1-82	99-99
NMB240			99-94	99-99
SDB500			99-99	99-99
MOB250			1-18	1-64
TXRB400			1-79	99-97
TXSB275			99-99	99-99
FLB1155			1-3	99-98

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 2017 and 2022.

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 2016 to 2017 and from 2016 to 2022.

## Implications of the December 2017 FAPRI Baseline on the Economic Viability of Representative Farms Primarily Producing Beef Cattle

	Receipts	Payments	NCFI	Reserve 2022	Net Worth 2022	CRNW
	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(%)
NVB650	568.02	0.00	145.56	120.90	7,801.40	(0.88)
NVSB550	526.52	0.00	196.78	393.12	2,658.04	1.65
MTB600	426.33	0.00	54.44	(374.33)	7,127.18	(1.52)
WYB475	428.81	0.00	(32.70)	(1,021.51)	1,462.88	(6.30)
COB275	252.64	0.00	58.39	(127.54)	13,114.29	(1.17)
NMB240	240.71	0.00	91.22	(162.25)	6,444.95	(1.28)
SDB500	333.74	0.00	(39.26)	(1,016.69)	6,478.22	(2.44)
MOB250	359.58	6.51	172.97	118.82	2,957.62	(0.35)
TXRB400	436.07	0.00	81.87	(129.26)	7,698.21	(1.20)
TXSB275	241.67	0.00	40.57	(322.23)	4,440.92	(1.63)
FLB1155	802.70	0.00	233.29	509.42	23,259.44	(0.76)

1 Receipts are average annual total cash receipts including government payments, 2017-2022 (\$1,000)

2 Payments are average annual total government payments, 2017-2022 (\$1,000)

3 NCFI is average annual net cash farm income, 2017-2022 (\$1,000)

4 Reserve 2022 is average ending cash reserves, 2022 (\$1,000)

5 Net Worth 2022 is average nominal ending net worth, 2022 (\$1,000)

6 CRNW is average percentage change in real net worth over 2017-2022 period, (%)

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