

Farm Income Outlook

ALLEN M. FEATHERSTONE
KANSAS STATE UNIVERSITY



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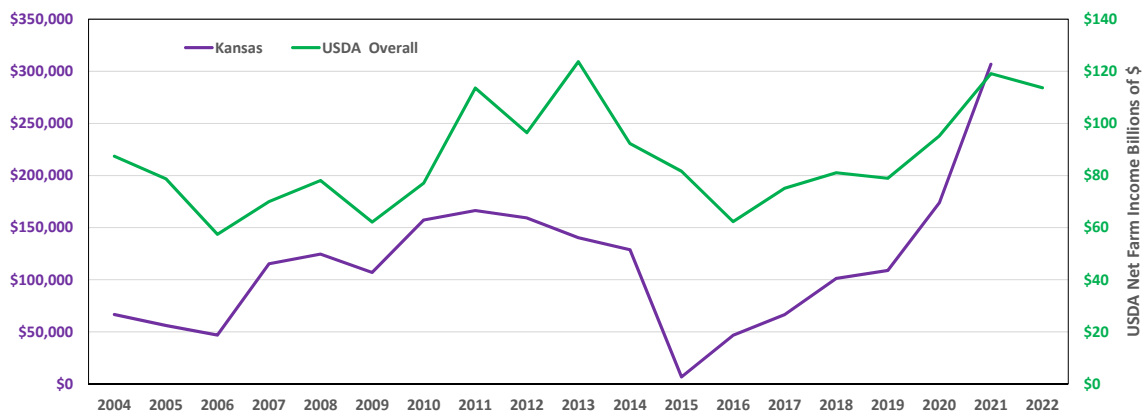
Introduction

- ❖ An outstanding farm economy through the end of 2021 with another strong year into 2022
- ❖ Net farm income and government program payments
- ❖ Examination of 416 KFMA farms with continuous data 2014 through 2021
 - ❖ Probability of Default
 - ❖ Debt to Asset Ratio
 - ❖ Working Capital Position
 - ❖ Capital Debt Repayment Capacity
- ❖ 2022 and 2023
- ❖ Farm Interest Rates



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Net Farm Income – Kansas Farm Management and Aggregate U.S.



KFMA Average Net Farm Income and Government Payments

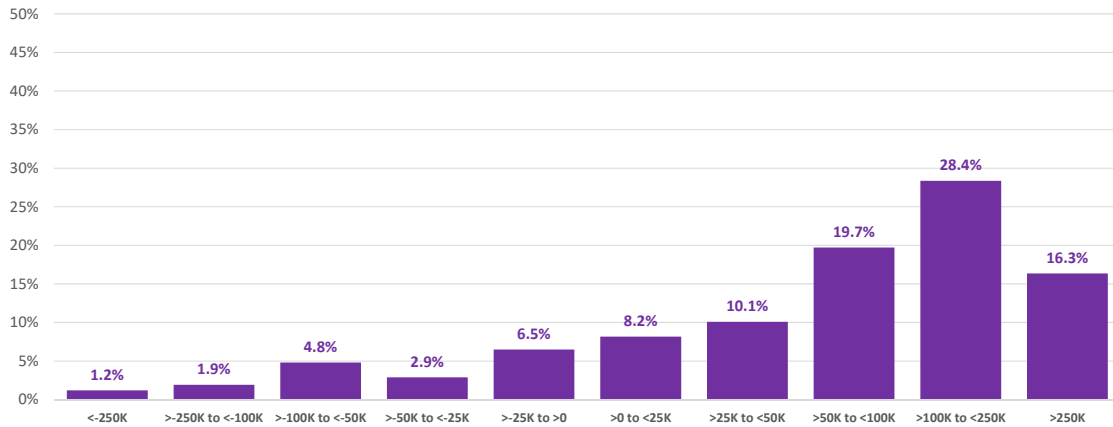
	2014	2015	2016	2017	2018	2019	2020	2021
Net Farm Income	\$136,127	\$11,134	\$63,941	\$75,687	\$112,501	\$126,441	\$178,246	\$341,384
Government Payments	\$26,144	\$21,575	\$26,247	\$27,886	\$42,209	\$91,677	\$129,106	\$66,029
Government Payments as a Percent of Income	19.2%	193.8%	41.0%	36.8%	37.5%	72.5%	72.4%	19.3%

Sample size is 416 farms with 2014 to 2021 continuous data

Government Payments are important as a percentage of income for farms

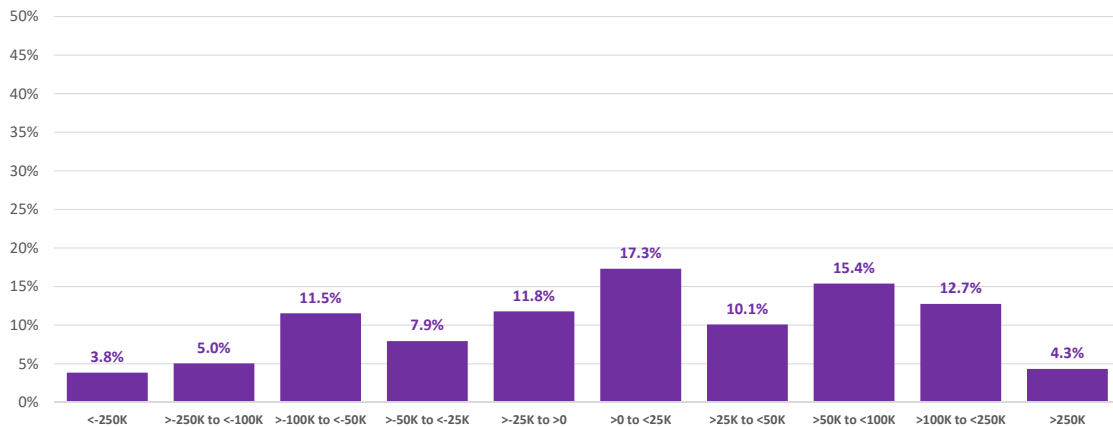


Distribution of 2014 Net Farm Income



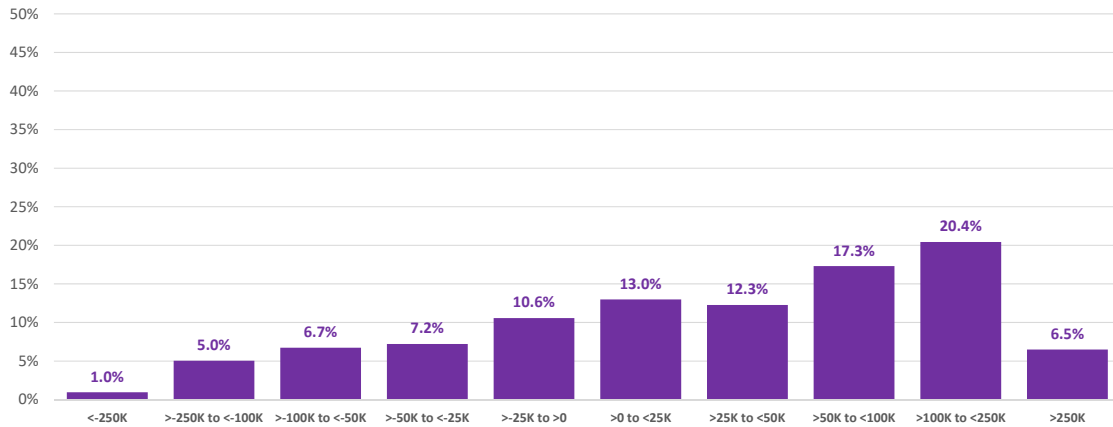
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Distribution of 2015 Net Farm Income



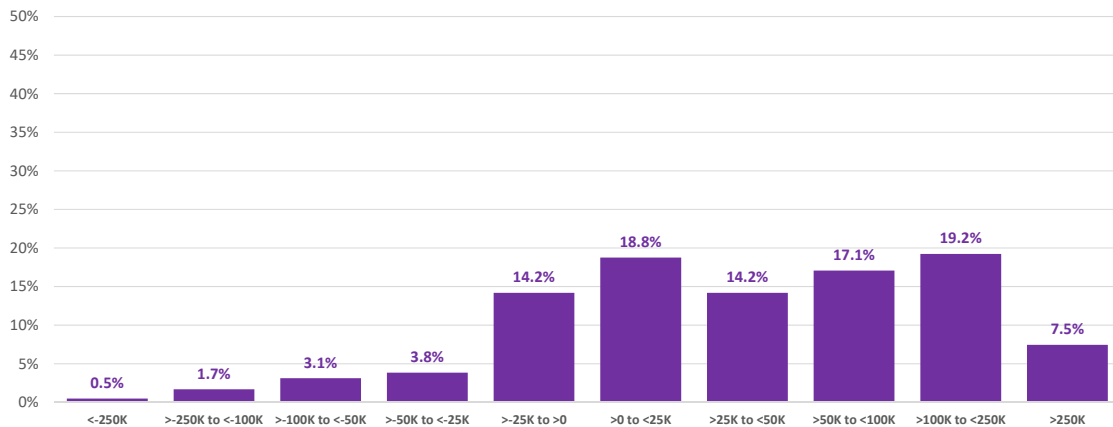
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Distribution of 2016 Net Farm Income



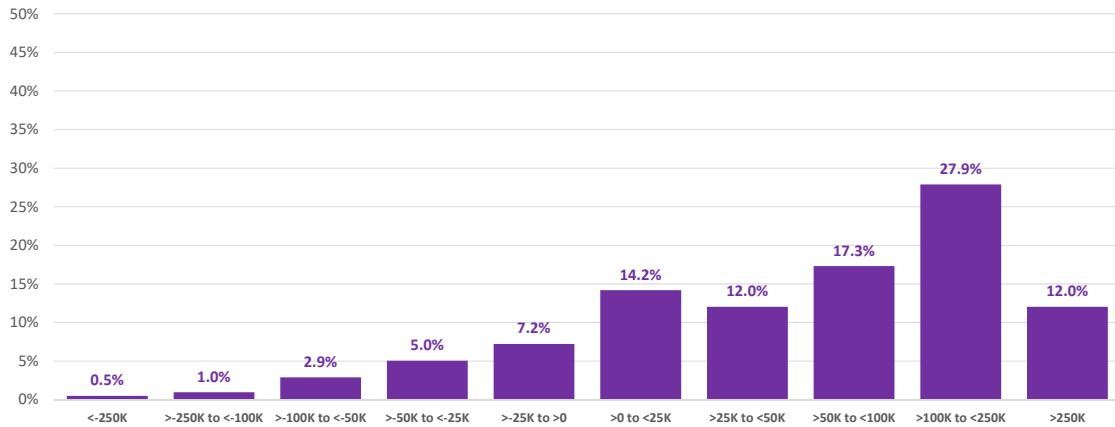
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Distribution of 2017 Net Farm Income



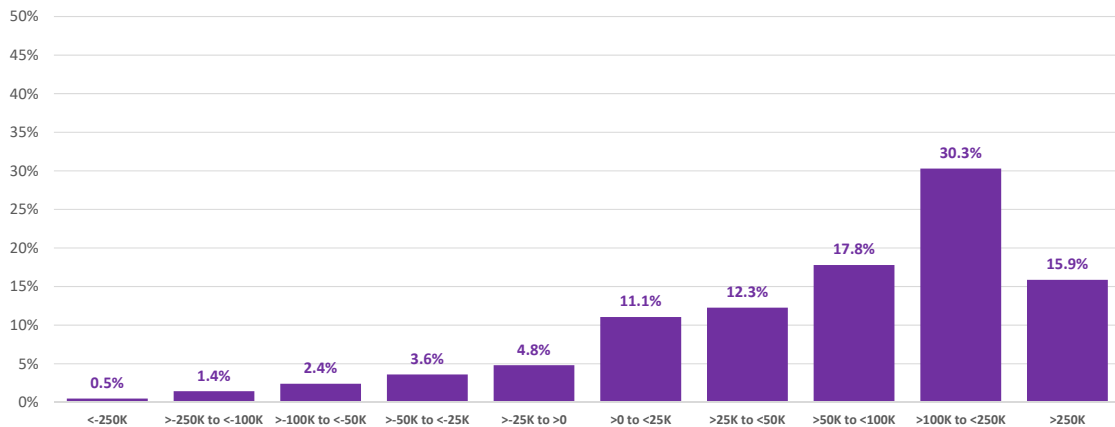
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Distribution of 2018 Net Farm Income



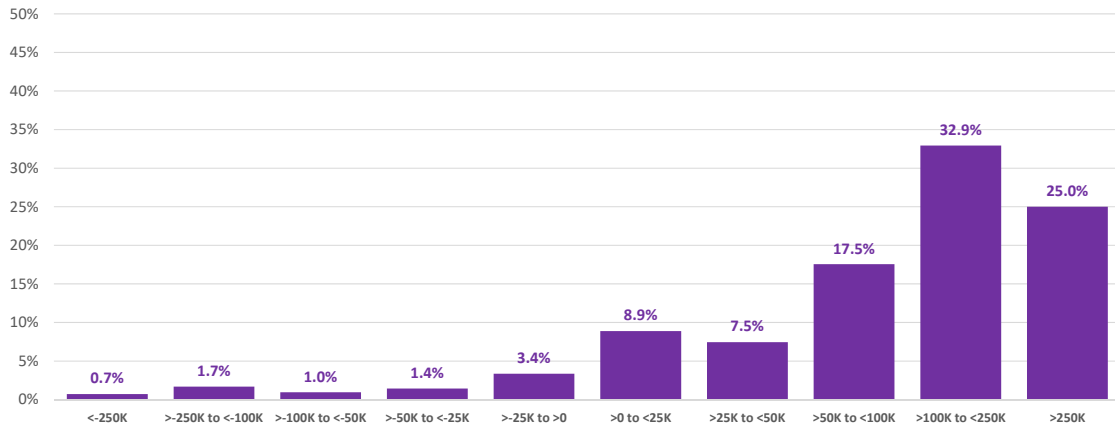
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Distribution of 2019 Net Farm Income



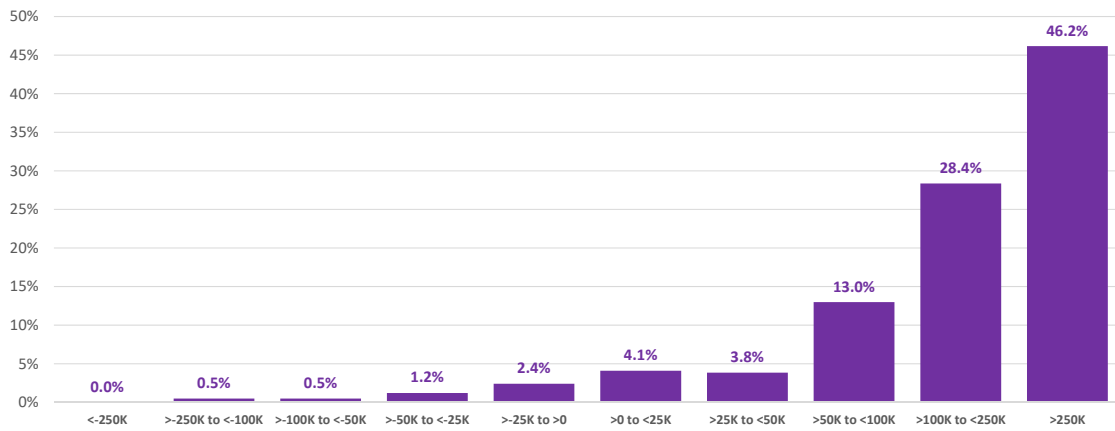
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Distribution of 2020 Net Farm Income



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Distribution of 2021 Net Farm Income



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Distribution of KFMA Net Farm Income

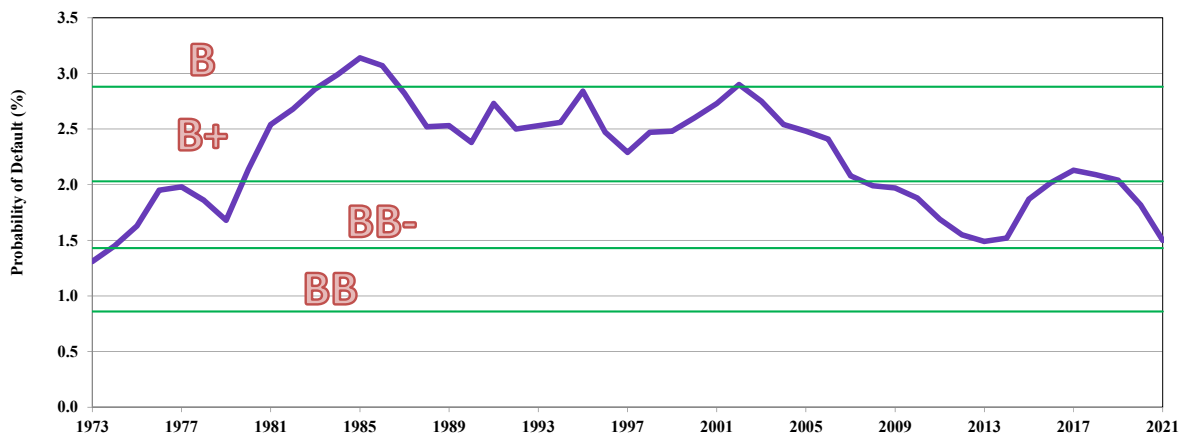
Farms with	2014	2015	2016	2017	2018	2019	2020	2021
Negative Net Farm Income	17.3%	40.1%	30.5%	23.3%	16.6%	12.7%	8.2%	4.6%
Net Farm Income Less than \$50,000	35.6%	67.5%	55.8%	56.3%	42.8%	36.1%	24.5%	12.5%

Farms with negative income each year from 2014 – 0.0%

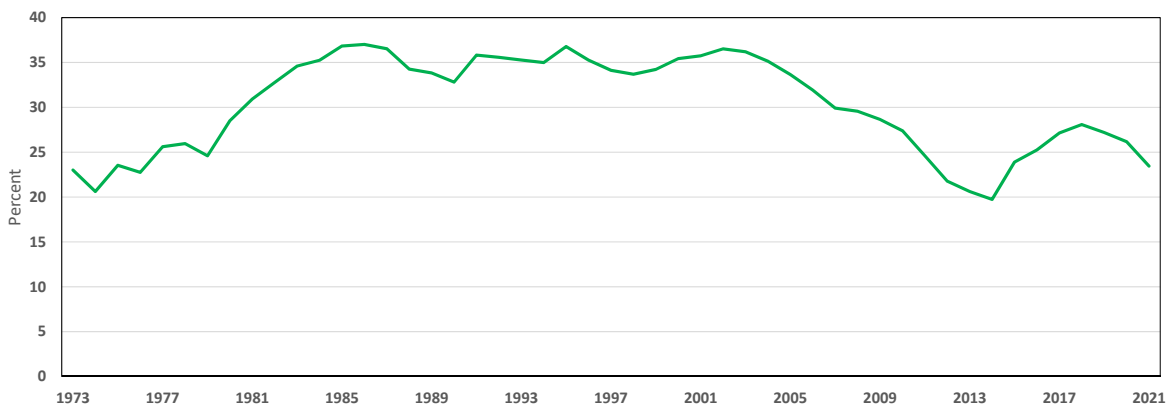
Farms with positive income each year from 2014 – 30.3%



Default Risk for KFMA farms 1973 through 2021



KFMA Farms Debt to Asset Ratio

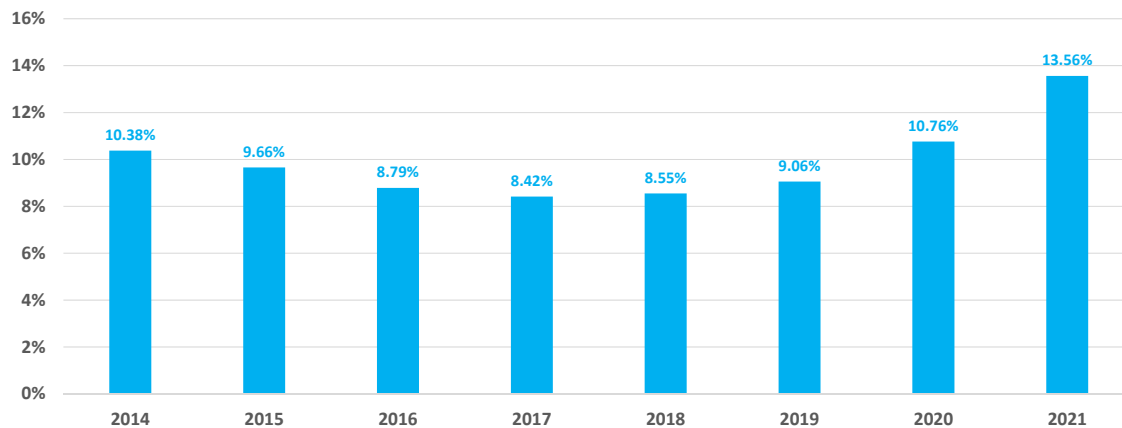


Lower Tail of the Debt to Asset Ratio

Farms with	2014	2015	2016	2017	2018	2019	2020	2021
Debt > 40%	11.1%	16.6%	20.2%	21.2%	21.2%	20.0%	15.6%	13.0%
Debt > 70%	1.4%	2.4%	3.4%	3.8%	3.8%	3.8%	2.9%	1.4%



KFMA Farms Working Capital to Asset Ratio



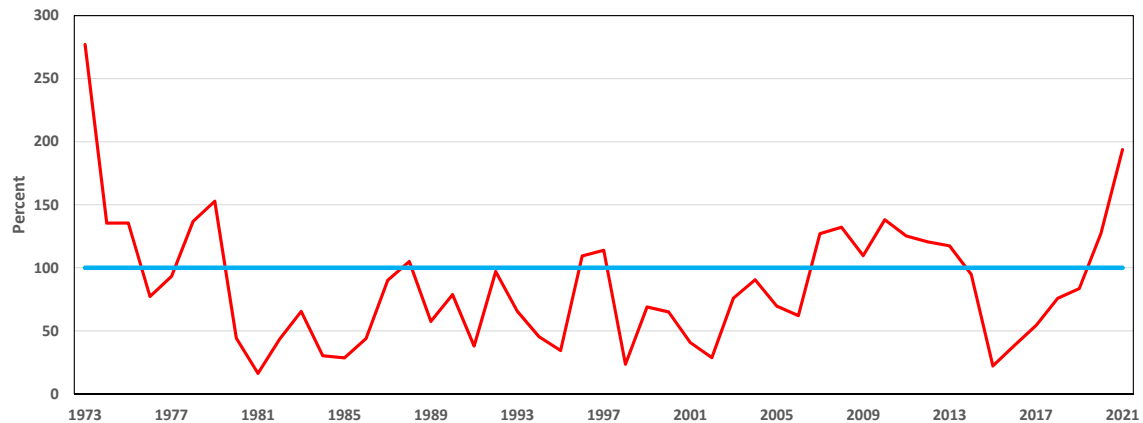
Tails of the Working Capital to Asset Ratio

Farms with	2014	2015	2016	2017	2018	2019	2020	2021
Ratio < 0%	14.2%	18.8%	23.6%	25.7%	24.5%	23.3%	18.0%	11.3%
Ratio > 20%	19.0%	21.9%	19.7%	19.5%	19.5%	19.0%	22.1%	26.2%

Working Capital to Asset Ratio has improved and is the best it has been since 2014



KFMA Farms Repayment Capacity

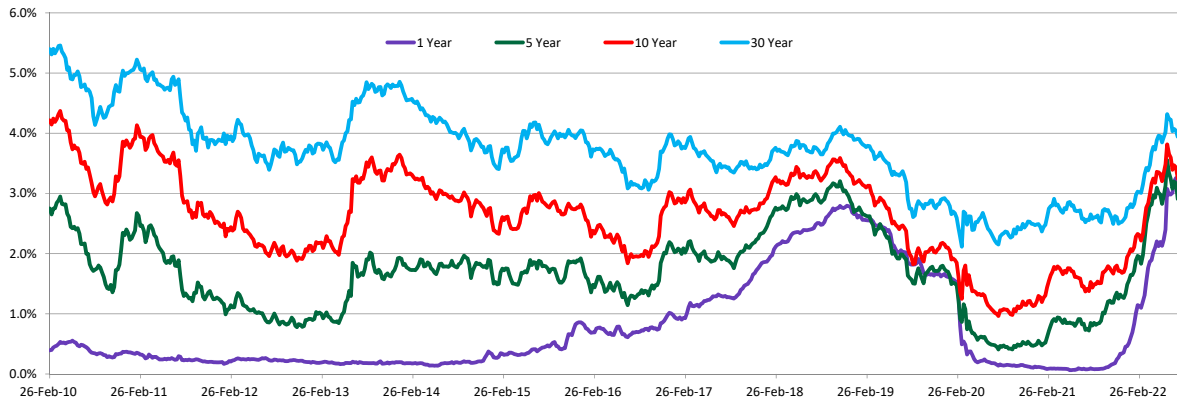


Summary

- At the end of 2021, Kansas has experienced 6 years of increasing average net farm income
 - Farms with negative net income fell from 40.1% of farms in 2015 to 4.6% of farms in 2021
 - Much of that improvement was due to increasing government payments until 2021
- The debt to asset ratio improved in 2021
 - 13.0% of KFMA farms had a debt to asset ratio of greater than 40%, down from 21.2% in 2018
 - 1.4% of KFMA farms had a debt to asset ratio of greater than 70%, down from 3.8% in 2018
- The working capital to asset ratio increased for the 4th year in a row in 2021
- The capital debt repayment capacity increased for the 6th year in a row in 2021
- Excellent financial condition going into 2022

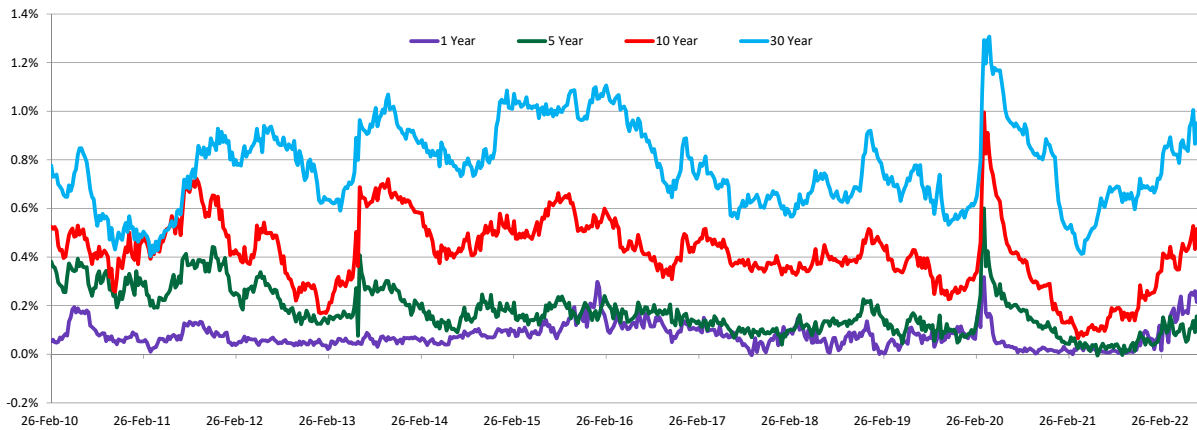


Weekly Farm Credit Acquisition Cost



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Weekly Farm Credit Spreads



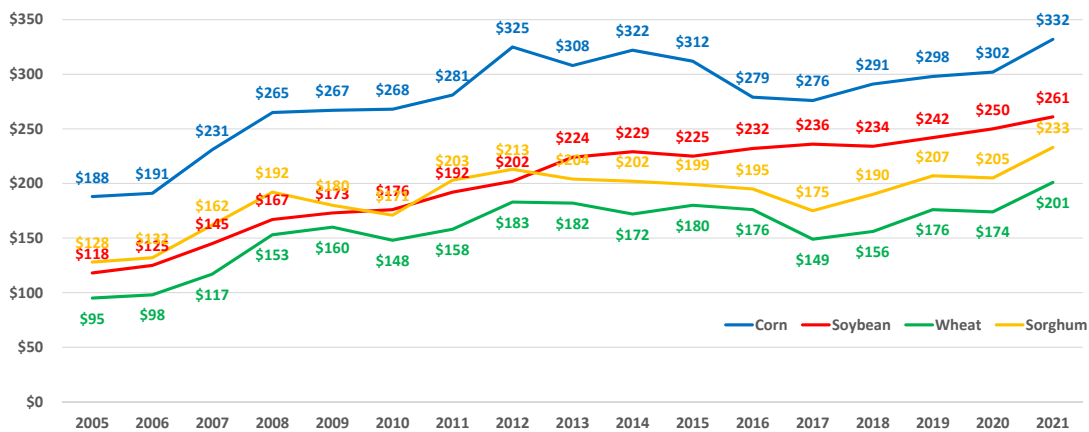
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Farm Credit – Treasury Spread Summary

- Farm Credit acquisition cost has generally followed treasuries
- Acquisition rates for 30-year money is right at 4.0%
- Acquisition rates for 10-year money has increased to 3.3%
- Acquisition rates for 5-year money has increased to 3.0%
- Acquisition rates for 1-year money has increased to 3.4%
- Farm Credit – Treasury Spreads are low:
 - At 0.19% for 1-year money
 - At 0.09% for 5-year money
 - At 0.48% for 10-year money
 - At 0.97% for 30-year money
- Investor's view lending to the U.S. government and U.S. farmers of equal risk for the next 5 years
 - 10-year spread has tripled over the last 6 months
 - Increase in 30-year spread of 0.3%



KFMA Enterprise Non-Irrigated Variable Cost of Production per Acre

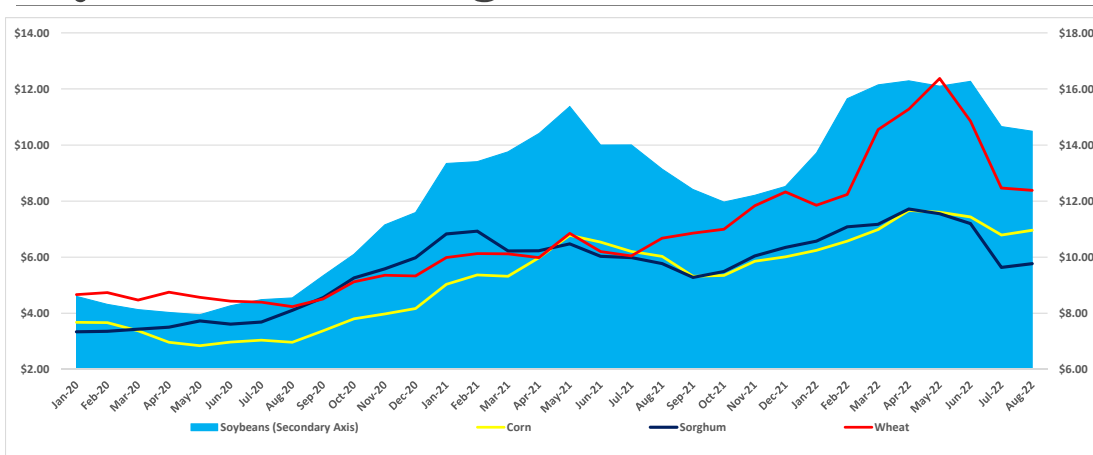


2021 Enterprise Information

- Kansas Corn – 2021 Yield 1.3% above the previous 5-year average
 - Revenue - \$565 per acre
 - Variable Cost - \$332 per acre
 - Total Cost - \$471 per acre
- Kansas Soybeans – 2021 Yield 8.1% below previous 5-year average
 - Revenue - \$465 per acre
 - Variable Cost - \$261 per acre
 - Total Cost - \$390 per acre
- Kansas Wheat – 2021 Yield 10.6% above the previous 5-year average
 - Revenue - \$329 per acre
 - Variable Cost - \$201 per acre
 - Total Cost - \$300 per acre
- Kansas Sorghum – 2021 Yield 2.6% below the previous 5-year average
 - Revenue - \$453 per acre
 - Variable Cost - \$233 per acre
 - Total Cost - \$339 per acre



Soybean, Corn, Sorghum, and Wheat Prices



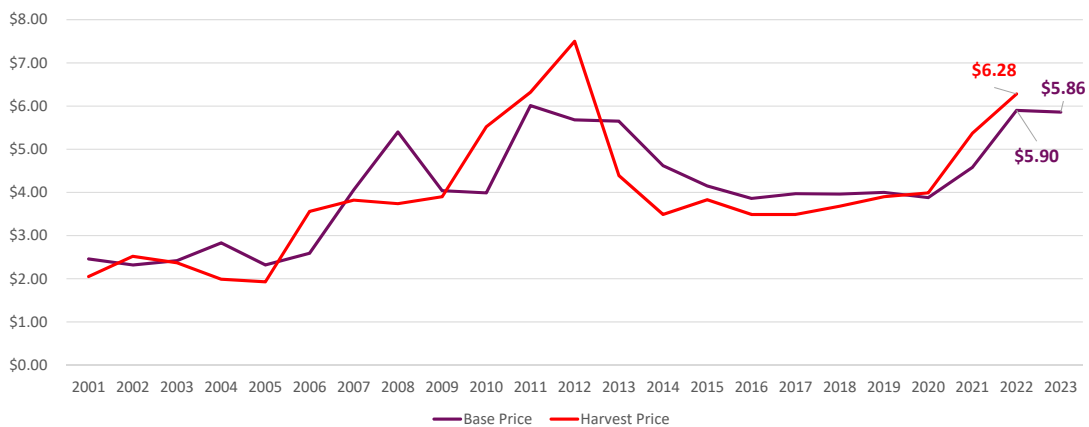
2022 Price Outlook

Commodity	Cash Bid (6/9)	Cash Bid (8/15)	Forward Bid (2022)	Difference (8/15)
Wheat	\$11.39	\$8.64	---	---
Corn	\$7.58	\$6.92	\$6.54	\$0.38
Sorghum	\$7.33	\$6.07	\$5.99	\$0.08
Soybean	\$17.01	\$14.51	\$13.50	\$1.01

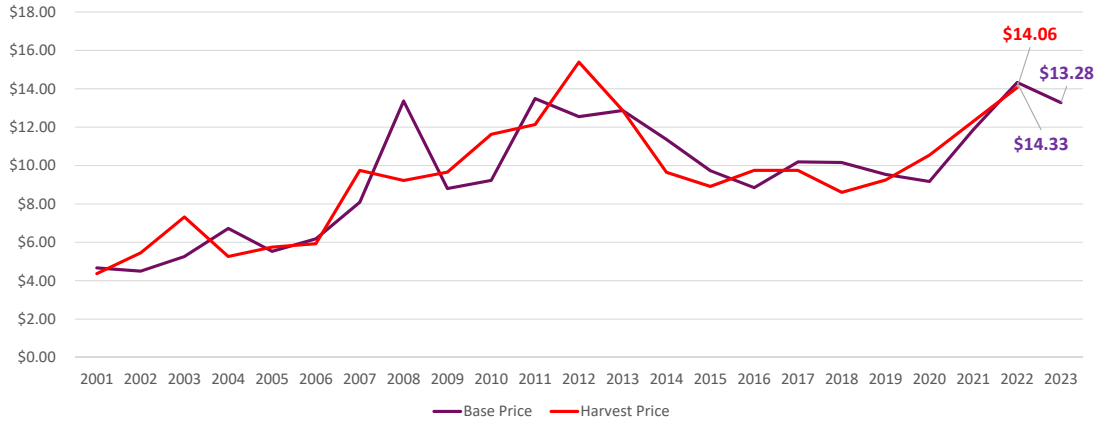
August 15, 2022, Harvest Price Bid at Salina, Kansas



Crop Insurance – Corn Contract Price

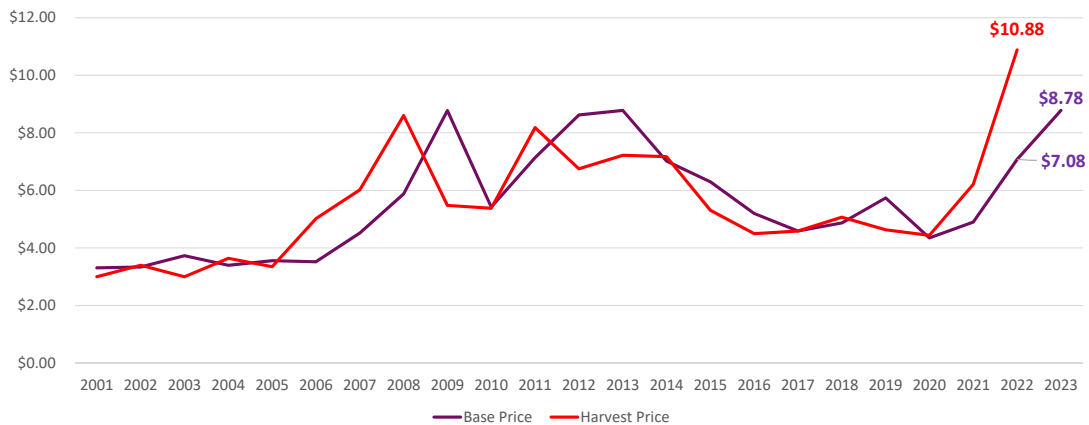


Crop Insurance – Soybean Contract Price



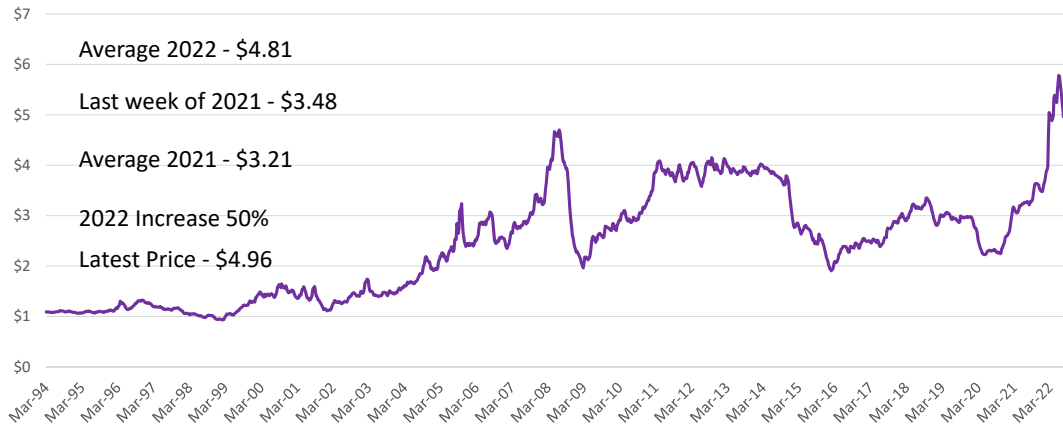
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Crop Insurance – Wheat Contract Price



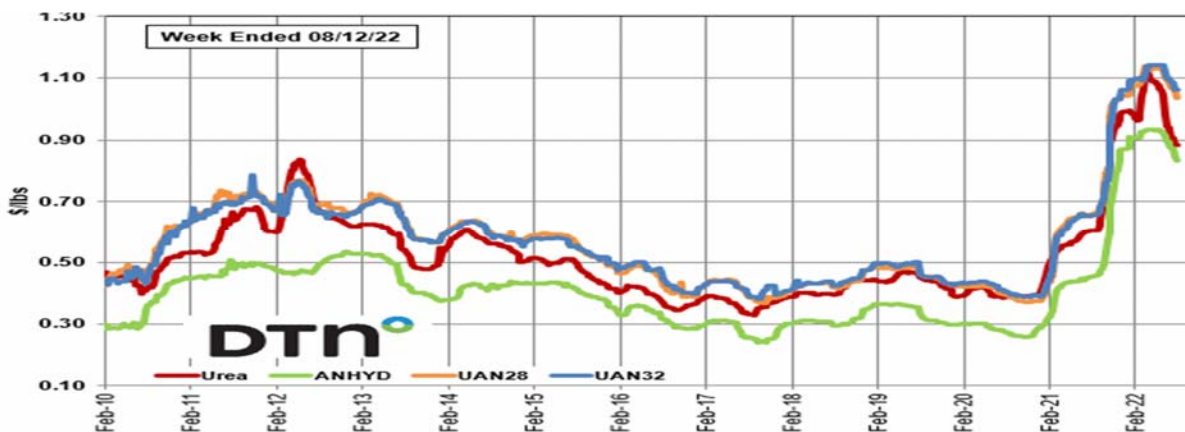
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Midwest Diesel Fuel Prices



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Cost of Nitrogen per pound



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December 2022 Fertilizer Futures

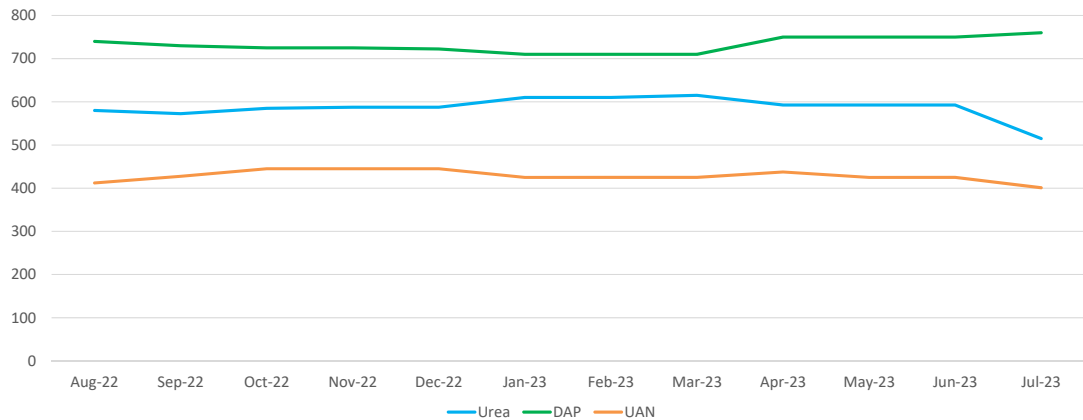
Published on TradingView.com, Aug 17, 2022 16:51 UTC-5
 UREA (ORANGE) FOR US GULF FUTURES (DEC 2022), 10, CBOT -22.00%
 DIAMMONIUM PHOSPHATE (DAP) (ORANGE) FOR US GULF FUTURES (DEC 2022), 10, CBOT -41.00%
 UREA AMMONIUM NITRATE (UAN) (GREEN) FOR US GULF FUTURES (DEC 2022), 10, CBOT -14.00%

Urea – Blue -22% since April
 Diammonium Phosphate – Orange 41% since April
 Urea Ammonium Nitrate – Green 14% since April



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Fertilizer Futures Prices 8/15/2022



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Prices Paid by Farms (June 2022)

- ❖ Fertilizer up 54% from June 2022
- ❖ Chemicals up 29% from June 2022
- ❖ Fuel up 66% from June 2022



2022 Non-Irrigated Crop Expense Estimates

Crop (NASS yield)	Per Acre				2022 Total Expense	Net Income
	2021 Expense	Fuel	Seed	Fertilizer		
Corn (123)	\$471	\$13.67	\$57.61	\$70.74	\$518	\$286
Sorghum (61)	\$339	\$9.73	\$14.33	\$60.35	\$378	-\$13
Soybean (40)	\$390	\$14.15	\$54.08	\$18.98	\$410	\$130
Wheat (38)	\$300	\$10.94	\$15.83	\$51.13	\$335	-\$7

Assumes 54% increase in fertilizer price

Assumes 66% increase in fuel price



Summary

- Crop farmers income will be down in 2022
- Government payments will be down in 2022 (likely zero)
- 2023 prospects are close to 2022 from a price standpoint
- Crop expenses will be up
 - Supply disruptions are concerning to the agricultural sector
- Russian Ukraine conflict will continue to drive prices



Allen Featherstone
afeather@ksu.edu

