

# Cash Rents in Kansas

2023 Webinar

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## Fair or Equitable Lease

### Fair Value

*A price which satisfies the buyer and seller equally. The parties enter the transaction willingly and with full knowledge about the product.*



*"The price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell."*

Any lease that a tenant and landlord willingly agree to in which they have both utilized the best information they have available to them in making a decision, is considered here to be a "fair" and/or "equitable" lease.

- A "fair" lease may be above or below the county average



# What Determines a Cash Rental Rate

## Local supply and demand

- Net returns and variability of returns are driving factors

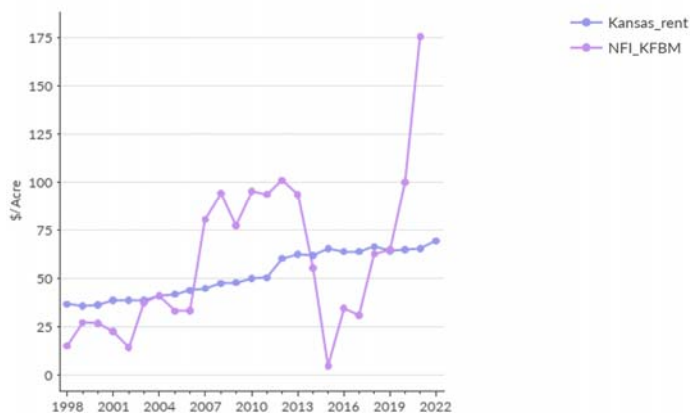
## Other factors

- farm location
- field size and shape
- land quality
- distance to market or storage
- Relationship between landlord and tenant



## Cash rents do change based on NFI per acre

State Cash Rent vs NFI per Acre



### U.S. Cash rent as a factor of current NFI

- R-sq of 43%

### U.S. Cash rent as a factor of lagged NFI

- 1 period lag - R-sq of 50%
- Combo of 1 and 2 year lag in NFI - R-sq of 60%

Thus, consistent past results guide current rental rates



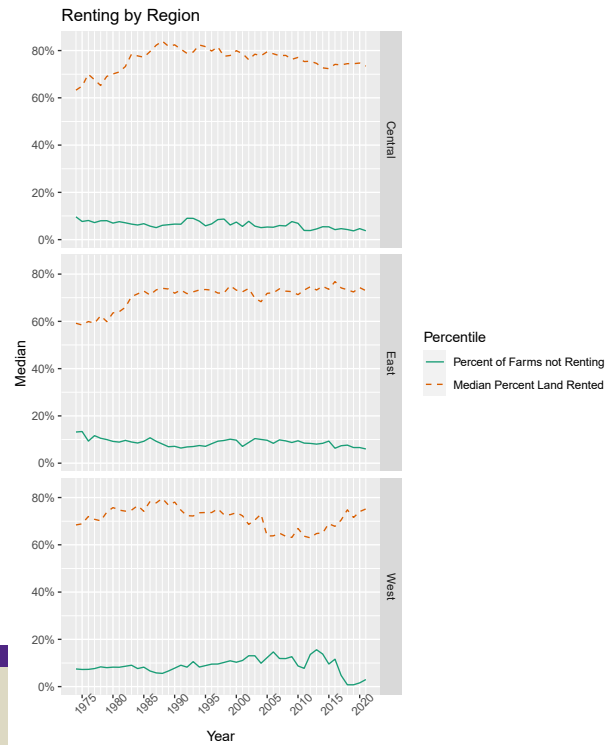
# Factors to consider for estimating cash rental rates

Nearly every farm leases some land

Local rental rates may not reflect the ability of the land to support going market rental rates

Issues from surveys of county rental rates

- Information may be outdated – time from survey until reported
- Truthfulness in survey responses
- Surveys could reflect multi-year leases from previous year
- A lack of information about lease rates that incorporate land productivity into the rate calculation



# Why Does Nearly Every Farm Rent Farmland?

Farmland will never cashflow

- Land is non-depreciable
- Typically, half of a farm's real net returns occur as land appreciation

Because land will not cashflow, land income will not cover principal and interest payments

- Rented land is thus needed to help cover cashflow needs from purchased land.



# Purpose of Rental Publication

NOT an endorsement for what a tenant should actually pay a landlord

Instead, they are provided to give a **starting point** in lease negotiations

- There may be non-monetary factors
- Not every farm in a county is average

We provide a range of realistic values rather than a single point estimate



## Our approach

Tenant's residual method

- County yield history
- Recent grain prices
- KFMA farm expenses

Covers all expenses

- Cash or direct cost of production
- Includes fixed costs on machinery
- Includes unpaid operator labor
- Includes overhead and management fees

FULL ECONOMIC COSTS



# Details of tenant's residual approach

## Income – yields, prices, and government payments

- Yields – NASS no longer provides separate irrigated and non-irrigated yields
  - FSA does have this info and also number of crop acres in a county
  - Use of last 5 years of data
- Prices – Use of weighted average with more weight being given to most recent years

## Expenses

- Use of KFMA data
- Developed at the enterprise level to account for different crop mixes each year
- Only corn, soybeans, wheat, and grain sorghum used
- Developed at the farm level but then aggregated up to the Crop Reporting District level
  - This might account for some of the differences you see on the graphs



# Other details

## 75% of unpaid operator labor is included

- This allows for farm activities not related to crop production

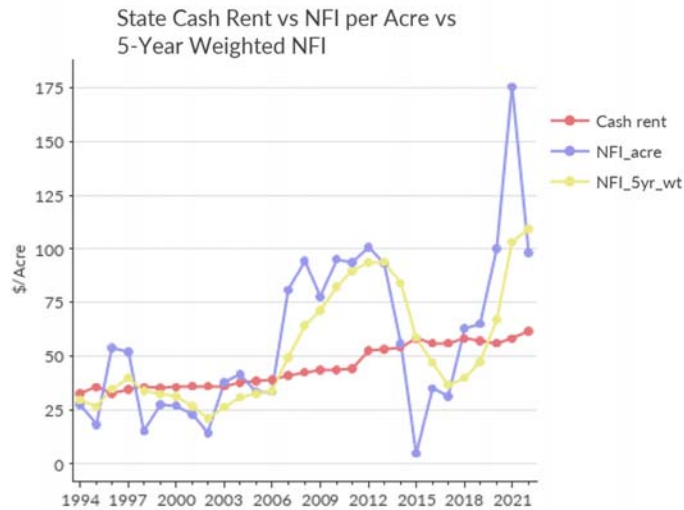
## 2% management fee based on gross revenue

- This includes management and also the interest charge for any owned machinery equity on the farm.

## Weights used for the estimates

- 2022 – 30%
- 2021 – 25%
- 2020 – 20%
- 2019 – 15%
- 2018 – 10%
- Shifting of yearly weighting to put more emphasis on more recent years





## Using a 5-Year Weighted Ave to Provide Smoothing

Increases R-sq from 25% to 41%

The low R-sq with Kansas data is one of the reasons we tied the residual model results back into the NASS surveys



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## Other details

### Adjustment to NASS reported cash rent

- Helps to smooth the estimate
- Averaging the NASS estimate into the tenant's residual calculation
  - 60% weighting to NASS – was 50% last year
  - Capping the difference from NASS at 40%
  - This provides a smoothing effect

### Adjustment for land use intensity

- Needed to account for fallow and double cropping

### Incorporating a range of values

- 25<sup>th</sup> and 75<sup>th</sup> percentile



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# Factors affecting future NFI (and thus rents)



## Boom to bust?

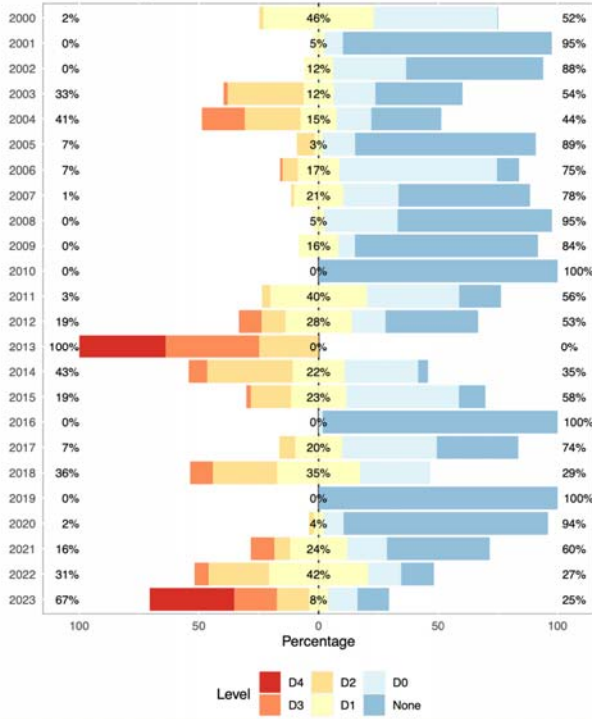
	Net Farm Income			
	2020	2021	2022(p)	Est 2023
NFI	\$ 190,966	\$ 355,467	\$ 156,767	\$ 40,566
% Change		86%	-56%	-74%

Future NFI will help show where cash rents may be headed.

The 2022 estimate is part of the 2023 cash rental publications



Kansas Drought Levels as of Week 8



# Will Weather be a big factor this year

My initial yield prediction for wheat – 36 bu/ac  
 Certainly not a great start

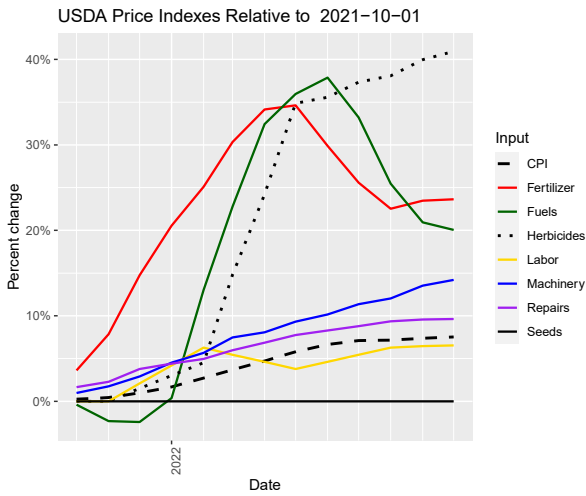
## What about expenses?

Another expensive year for farming

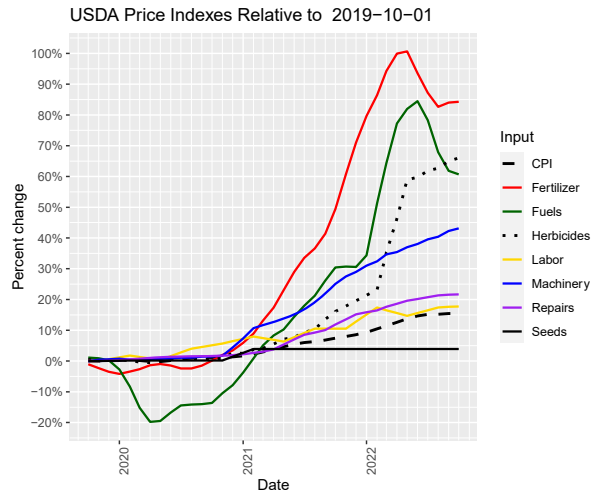


# USDA Expense Indexes – 1 and 3 year

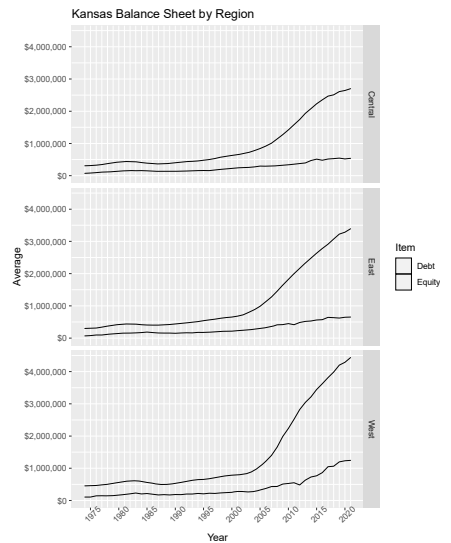
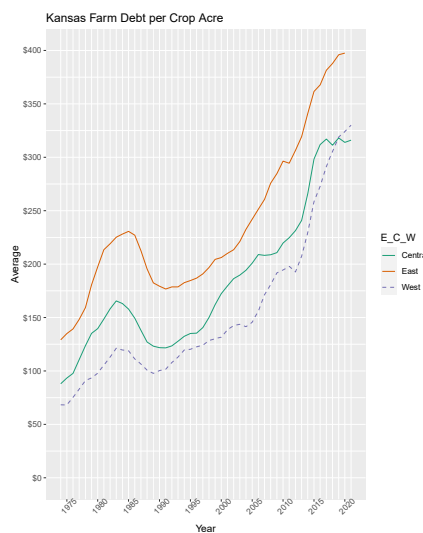
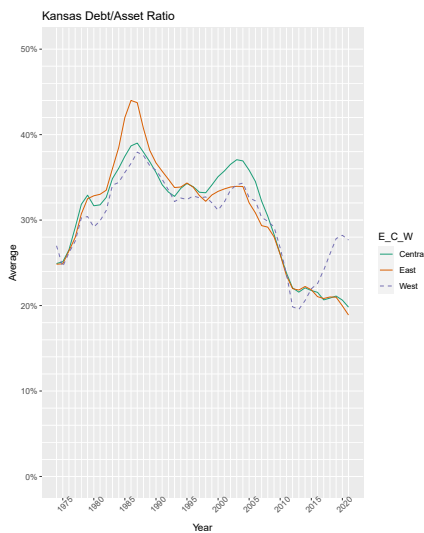
1 – year change



3 – year change



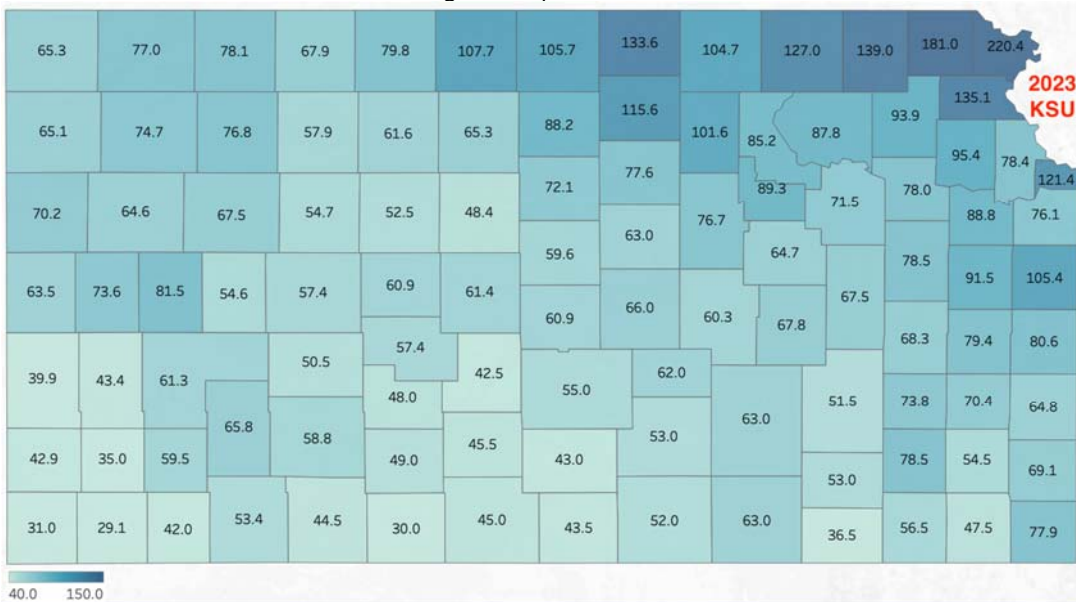
# How are farmers faring?



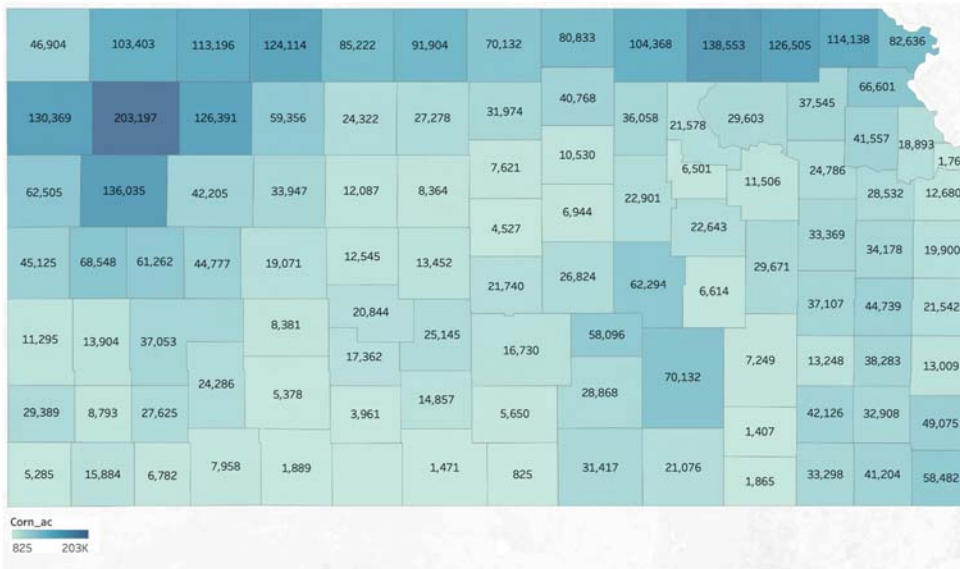
**2022 NASS Survey - Non-Irrigated Crop Land in Kansas**



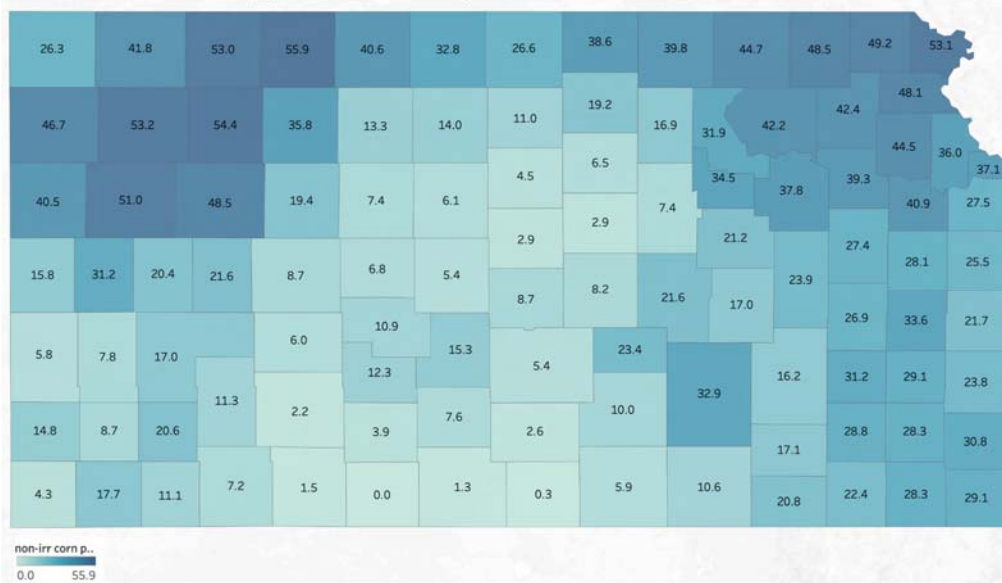
**2023 K-State Estimate - Non-Irrigated Crop Land in Kansas**



# Non-irrigated corn acres



# Non-irrigated crop acres - % Corn



Region	County	2021 NASS	2022 KSU	2022 NASS	2023 KSU	25th Percentile	75th Percentile	
Northwest	Cheyenne	47	64	50	65	41	93	
	Decatur	54	76	57	78	49	111	
	Graham	40	40	42	58	36	82	
	Norton	47	70	49	68	42	97	
	Rawlins	57	76	60	77	48	109	
	Sheridan	50	66	55	77	48	109	
	Sherman	58	65	58	65	41	93	
	Thomas	58	72	60	75	47	106	
	West Central	Gove	50	63	52	68	43	92
		Greeley	35	50	0	63	41	86
Lane		36	53	39	55	35	74	
Logan		44	60	50	65	41	88	
Ness		36	48	46	57	37	78	
Scott		48	71	61	81	52	111	
Trego		0	48	40	55	35	74	
Wallace		0	74	0	70	45	95	
Wichita		45	68	57	74	47	100	
Southwest		Clark	31	46	33	44	32	54
	Finney	41	62	45	61	44	75	
	Ford	38	56	42	59	42	72	
	Grant	31	47	28	35	25	43	
	Gray	47	71	47	66	47	80	
	Hamilton	32	35	34	40	29	49	
	Haskell	36	53	43	60	43	72	
	Hodgeman	32	48	37	51	36	62	
	Kearny	31	46	31	43	31	53	
	Meade	39	59	39	53	38	65	
	Morton	38	38	31	31	22	38	
	Seward	29	43	30	42	30	51	
	Stanton	32	47	38	43	31	52	
	Stevens	23	34	29	29	21	35	

Region	County	2021 NASS	2022 KSU	2022 NASS	2023 KSU	25th Percentile	75th Percentile
Northeast	Atchison	107	116	118	135	104	173
	Brown	166	166	181	181	140	232
	Doniphan	178	215	189	220	170	282
	Jackson	82	82	87	94	73	120
	Jefferson	74	87	72	95	74	122
	Leavenworth	68	70	68	78	61	101
	Marshall	115	115	127	127	98	163
	Nemaha	142	142	139	139	107	178
	Pottawatomie	71	75	76	88	68	113
	Riley	76	76	82	85	66	109
Wyandotte	0	103	0	121	94	156	
East Central	Anderson	59	86	59	79	63	95
	Chase	63	66	55	68	54	81
	Goffey	60	63	62	68	54	81
	Douglas	74	83	77	89	71	106
	Franklin	74	94	74	91	73	109
	Geary	70	80	76	89	71	106
	Johnson	58	77	56	76	61	91
	Linn	76	80	70	81	64	96
	Lyon	63	63	68	68	54	80
	Miami	91	103	91	105	84	126
	Morris	51	56	57	65	51	77
	Osage	54	76	65	79	62	94
	Shawnee	54	70	66	78	62	93
	Wabaunsee	54	60	62	72	57	85
	Southeast	Allen	49	74	56	70	51
Bourbon		45	61	52	65	47	86
Butler		45	68	45	63	46	84
Chautauqua		43	43	37	37	27	48
Cherokee		71	80	64	78	57	103
Cowley		55	55	63	63	46	84
Crawford		61	68	66	69	50	92
Elk		47	47	53	53	39	70
Greenwood		52	52	52	52	38	68
Labette		50	50	48	48	35	63
Montgomery		49	49	57	57	41	75
Neosho		51	57	47	54	40	72
Wilson		70	70	78	79	57	104
Woodson		56	74	54	74	54	98



## Crop Reporting Districts

		KSU	NASS
EAST	Northeast	124	114
	East Central	79	67
	Southeast	61	55
CENTRAL	North Central	95	73
	Central	62	53
	South Central	48	45
WEST	Northwest	70	54
	West Central	65	38
	Southwest	47	36



# Irrigation details

Based on growing corn only

Center pivot irrigation

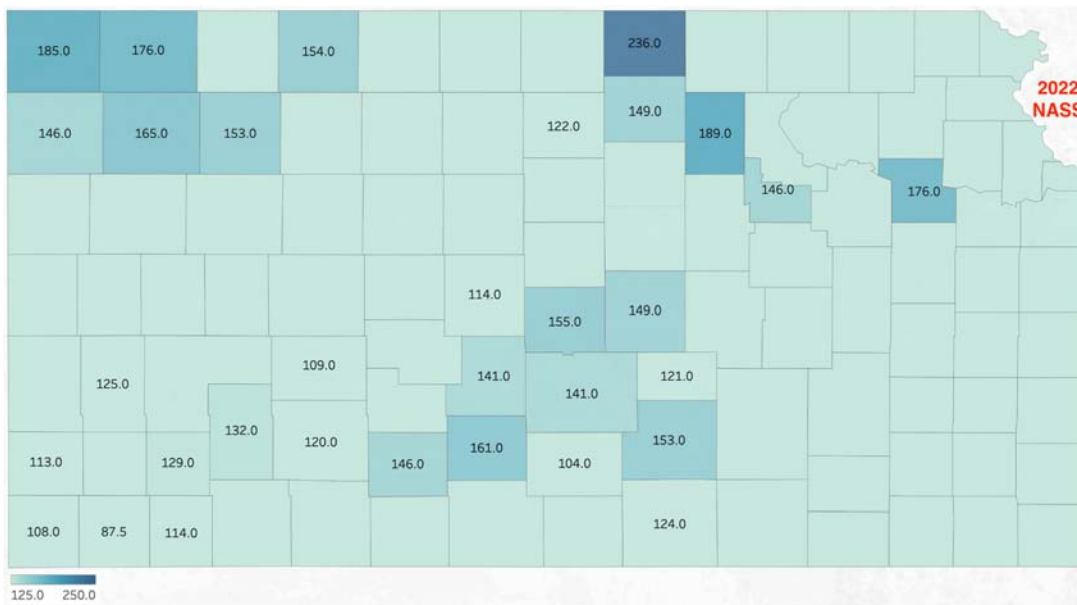
Landlord owns all irrigation equipment

- Adjustment if tenant owns part

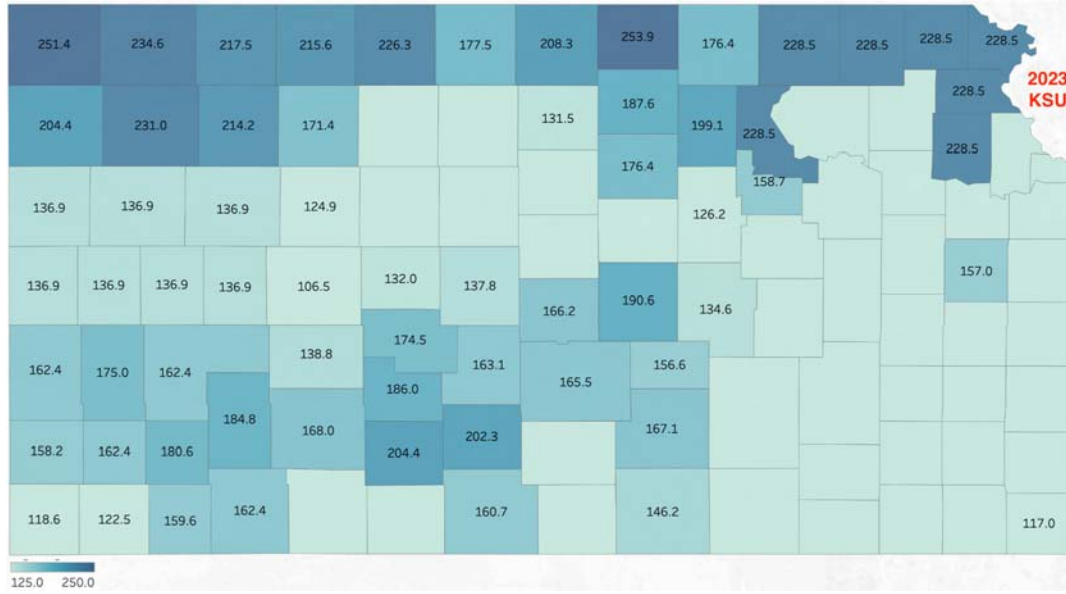
	Western KS	Central KS
Center Pivot	\$ 70.38	\$ 70.38
Power unit	\$ 26.29	\$ 14.84
Well, pump, and gearhead	\$ 90.40	\$ 60.46



2022 NASS Survey - Irrigated Crop Land in Kansas



2023 K-State Estimate - Irrigated Crop Land in Kansas



Region	County	2021 NASS	2022 KSU	2022 NASS	2023 KSU	25th Percentile	75th Percentile
Northwest	Cheyenne	144	216	185	251	157	357
	Decatur	148	220		217	136	309
	Graham	93	133		171	107	244
	Norton		221	154	216	135	306
	Rawlins	144	216	176	235	147	333
	Sheridan	147	221	153	214	134	304
	Sherman	174	234	146	204	128	291
	Thomas	191	260	165	231	145	328
West Central	Gove	124	179		137	88	186
	Greeley		147		137	88	186
	Lane		147		137	88	186
	Logan		147		137	88	186
	Ness				106	68	145
	Scott	72	107		137	88	186
	Trego				125	80	170
	Wallace		147		137	88	186
Wichita			147		137	88	186
Southwest	Clark						
	Finney	129	194		162	116	198
	Ford	122	183	120	168	120	205
	Grant		170		162	116	198
	Gray	109	164	132	185	132	225
	Hamilton		170		162	116	198
	Haskell	106	159	129	181	129	220
	Hodgeman		137	109	139	99	169
	Kearny	123	185	125	175	125	213
	Meade	138	207		162	116	198
	Morton		146	108	119	85	144
	Seward		170	114	160	114	194
	Stanton		170	113	158	113	193
Stevens	92	137	88	123	88	149	

Region	County	2021 NASS	2022 KSU	2022 NASS	2023 KSU	25th Percentile	75th Percentile
North Central	Clay	124	153	189	199	167	231
	Cloud	163	187	149	188	157	217
	Jewell		179		208	175	241
	Mitchell		168	122	132	110	152
	Osborne						
	Ottawa		168		176	148	204
	Phillips		212		226	190	262
	Republic	237	237	236	254	213	294
	Rooks						
	Smith	195	195		177	149	206
Washington		173	173		176	148	204
Central	Barton	84	109	114	138	110	169
	Dickinson		129		126	101	155
	Ellis						
	Ellsworth						
	Lincoln						
	Marion				135	108	165
	McPherson		173	149	191	153	234
	Rice	129	137	155	166	133	204
	Rush				132	106	162
	Russell						
South Central	Saline						
	Barber		134		161	132	201
	Comanche						
	Edwards	122	183		186	153	233
	Harper						
	Harvey	159	159	121	157	129	196
	Kingman	104	130	104			
	Kiowa	147	221	146	204	168	256
	Pawnee	121	164		174	143	218
	Pratt	134	191	161	202	166	253
	Reno	130	148	141	165	136	207
	Sedgwick	153	153	153	167	137	209
	Stafford	119	167	141	163	134	204
Sumner		134	124	146	120	183	



# Nebraska Farmland Values and Cash Rental Rates in 2023

**N** AGRICULTURAL ECONOMICS  
 March 15, 2023  
[agecon.unl.edu/cornhuskereconomics](http://agecon.unl.edu/cornhuskereconomics)

Reporters estimated cash rental rates from the **UNL Farm Real Estate Market Development Surveys** of 2022 & 2023

Based on [surveys of Nebraska land industry professionals](#) including appraisers, farm & ranch managers, ag bankers, & others

Web address of report:

[file:///C:/KSU%20Extension%20&%20Applied%20Research/Ag%20Econ%20Temp%20Files/NEFmRealEstate\\_2023.pdf](file:///C:/KSU%20Extension%20&%20Applied%20Research/Ag%20Econ%20Temp%20Files/NEFmRealEstate_2023.pdf)

Figure 2. Nebraska Agricultural Statistics Districts



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## Cash Rents for Nebraska Farmland & Pasture *Preliminary*

Average 2023 Rent, % Annual Change & High/Low 1/3 Land Quality

### Dryland (Non-Irrigated) Cash Rents for 2023

Type of Land	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
----- Dollars Per Acre -----								
<b>Dryland Cropland</b>								
Average .....	37	76	265	135	245	56	115	200
% Change .....	10	17	9	12	4	13	15	5
High Third Quality .....	49	105	315	160	285	74	140	245
Low Third Quality .....	28	55	205	110	205	45	89	165



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# Cash Rents for Nebraska Farmland & Pasture *Preliminary*

Average 2023 Rent, % Annual Change & High/Low 1/3 Land Quality

## Irrigated Cash Rents for 2023

Type of Land	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
----- Dollars Per Acre -----								
<b>Center Pivot Irrigated Cropland<sup>b</sup></b>								
Average .....	190	240	365	305	345	230	315	335
% Change .....	9	5	7	11	5	2	13	6
High Third Quality .....	230	285	410	350	385	275	355	370
Low Third Quality .....	155	195	315	245	295	190	260	290

<sup>b</sup> Cash rents on center pivot land assumes landowners own total irrigation system.



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# Cash Rents for Nebraska Farmland & Pasture *Preliminary*

Average 2023 Rent, % Annual Change & High/Low 1/3 Land Quality

## Pasture Rents for 2023

Type of Land	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
----- Dollars Per Acre -----								
<b>Pasture</b>								
Average .....	15	33	72	46	60	26	41	56
% Change .....	7	10	4	13	9	6	2	5
High Third Quality .....	20	46	95	59	73	34	55	71
Low Third Quality .....	13	18	53	37	48	21	29	45



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# Cash Rents for Nebraska Farmland & Pasture *Preliminary*

Average 2023 Rent, % Annual Change & High/Low 1/3 Land Quality

## Cow-Calf Pair Monthly Rates for 2023

Type of Land	Agricultural Statistics District							
	Northwest	North	Northeast	Central	East	Southwest	South	Southeast
----- Dollars Per Month -----								
<b>Cow-Calf Pair Monthly Rates<sup>c</sup></b>								
Average .....	46.05	69.80	67.35	66.70	62.55	58.60	56.85	60.20
% Change .....	7	4	2	9	7	3	11	5
High Third Quality .....	51.95	78.50	76.45	75.25	71.40	63.75	65.30	70.55
Low Third Quality .....	38.15	59.65	54.70	53.90	55.05	50.45	45.80	48.60

<sup>c</sup> A cow-calf pair is typically considered to be 1.25 to 1.30 animal units (animal unit being 1,000 lb. animal) for a five month grazing season. However, this can vary depending on weight of cow and age of calf.



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## Thank you!

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