

2023 Kansas County-Level Cash Rental Rates for Irrigated Cropland

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Intended Use

This publication is a sister publication to the *2023 Kansas County-Level Cash Rental Rate for Non-Irrigated Cropland* (available on AgManager.info). A procedure similar to the one used to develop the non-irrigated cash rental rates is employed for this publication of irrigated cash rental rates. The rental rate estimates provided in this publication are intended for 2022 into 2023 crop year. The estimate includes an expectation of 2022 farm profitability. Because the estimate is based on average irrigated corn yields for the county, actual lease rates could be higher or lower. In particular, the use of irrigated corn only for these estimates likely means the highest expected profitability for an irrigated acre. Estimates are also a function of NASS survey rates from 2022 to help smooth out the estimate. The estimates that are provided are intended to cover all expenses and not just the cash cost. These estimates are also not an endorsement for what a tenant and landlord should pay. They are merely provided to give a starting point in lease negotiations. Any lease that a tenant and landlord willingly agree to is considered a “fair” lease.

Approach

The approach to develop these estimates of irrigated cash leases is nearly identical to the non-irrigated lease rates. Please see this other publication for full details. While the non-irrigated estimates is based on the percentage of corn, grain sorghum, wheat, and soybeans in a county, these estimates of irrigated lease rates are based solely on growing irrigated corn only on the irrigated land. As in the non-irrigated estimates, FSA reported acres and yields are used.

The reported cash rent estimates are all based on the assumption that the landlord owns all irrigation items. For those acres where the tenant may own part of the irrigation process, the following values of fixed costs for components of the irrigation process can be subtracted from the estimated cash rental rate. These values are taken from K-State irrigated crop budgets and represent wells of two different depths. In Western Kansas, a 300 well depth is assumed while in Central Kansas, a 150 foot well depth is assumed.

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Table 1. Capital Recovery Costs (Depreciation and Interest) for Irrigation Equipment in Kansas.

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

The operating costs and repair and maintenance of the irrigation equipment are assumed to be the responsibility of the tenant no matter who owns the equipment.

Results

Tables 2, 3, and 4, along with Figures 1 and 2 show the results of estimating a potential cash rent for 2022/23 irrigated cropland. The 2021 and 2022 NASS values are shown along with the predicted KSU value and the potential ranges for cash rents. Figure 1 shows the NASS August survey results for irrigated cropland while Figure 2 shows the predicted KSU value on a color coded state map of Kansas counties. Darker values have higher predicted cash rental rates

References

Ibendahl, G. and D. O'Brien. 2022. "2023 Kansas County-Level Cash Rental Rates for Non-Irrigated Cropland." AgManager Publication - GI-2022.32, September 19, 2022. (<https://www.agmanager.info/farm-management/land-rental-rates/2023-kansas-county-level-cash-rental-rates-non-irrigated-cropland>).

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Table 2. Estimated Cash Rental Rates for Irrigated Cropland in Western 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

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Table 3. Estimated Cash Rental Rates for Irrigated Cropland in Central Kansas

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						
	Saline						
South Central	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

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Table 4. Estimated Cash Rental Rates for Irrigated Cropland in Eastern Kansas

Region	County	2021 NASS	2022 KSU	2022 NASS	2023 KSU	25th Percentile	75th Percentile
Northeast	Atchison				229	177	293
	Brown	234	234		229	177	293
	Doniphan				229	177	293
	Jackson						
	Jefferson				229	177	293
	Leavenworth						
	Marshall				229	177	293
	Nemaha	223			229	177	293
	Pottawatomie						
	Riley				229	177	293
	Wyandotte						
East Central	Anderson						
	Chase						
	Coffey						
	Douglas						
	Franklin				157	125	187
	Geary		149	146	159	126	189
	Johnson						
	Linn						
	Lyon						
	Miami						
	Morris						
	Osage						
	Shawnee	149		176			
	Wabaunsee						
Southeast	Allen						
	Bourbon						
	Butler						
	Chautauqua						
	Cherokee		110		117	85	155
	Cowley						
	Crawford						
	Elk						
	Greenwood						
	Labette						
	Montgomery						
	Neosho						
	Wilson						
	Woodson						

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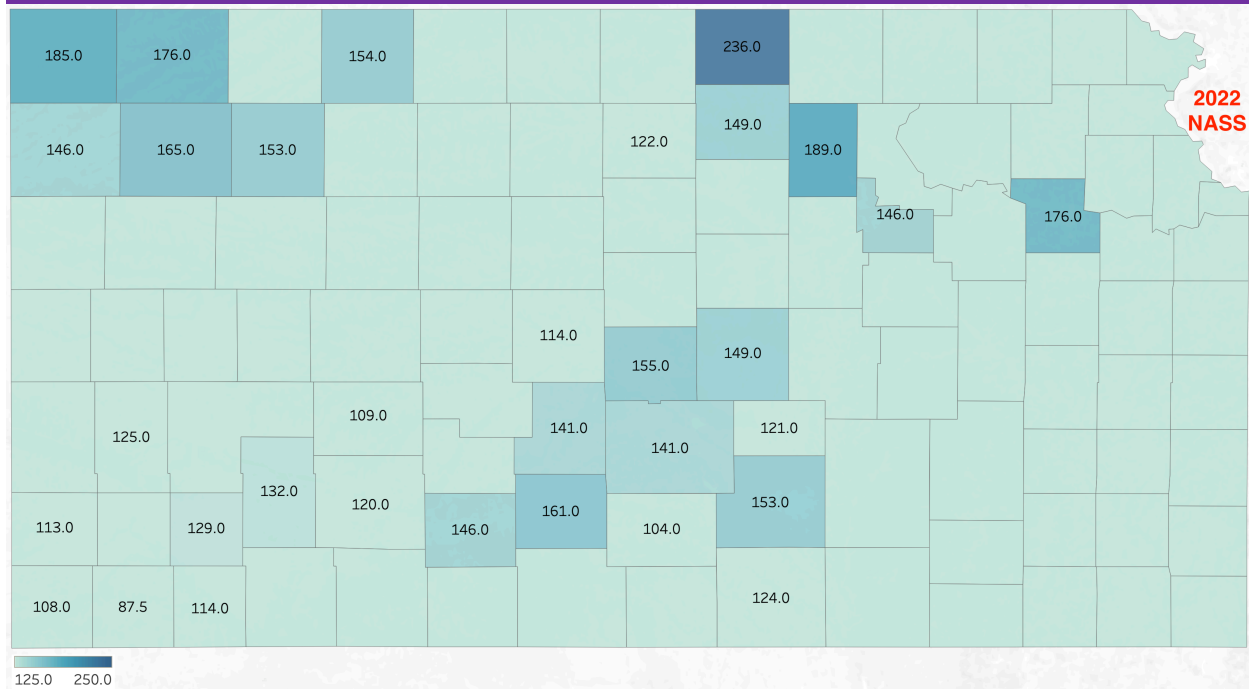


Figure 1. 2022 USDA-NASS Cash Lease Survey Results for Irrigated Crop Land in Kansas. Color Code by (\$/ac).

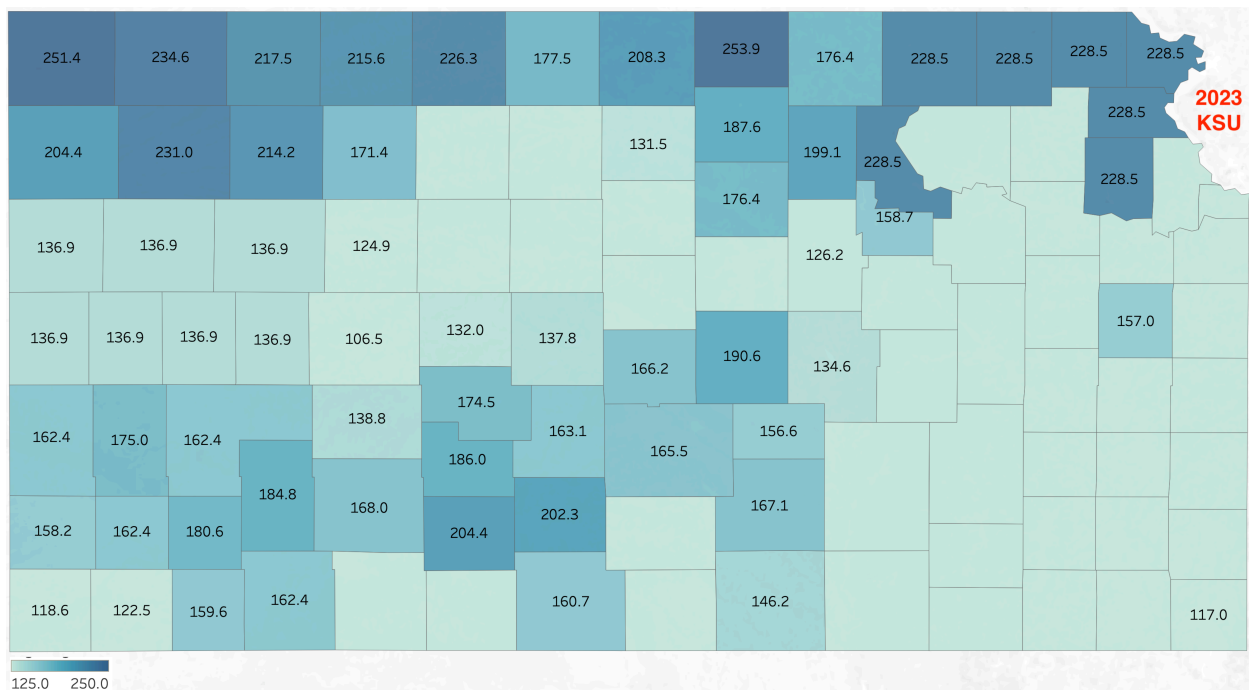


Figure 2. 2023 KSU Cash Lease Estimates for Irrigated Crop Land in Kansas Using Tenant's Residual Approach. Color Coded by (\$/ac).