



2019 Kansas County-Level Land Values for Cropland and Pasture

April 2020 (available at www.AgManager.info)

Mykel Taylor, K-State Ag Economics, (785) 532-3033, mtaylor@ksu.edu
Department of Agricultural Economics, Kansas State University

2019 Kansas County-Level Land Values for Cropland and Pasture

Mykel R. Taylor

Department of Agricultural Economics

The value of Kansas cropland and pasture land has been changing rapidly over the past several years. As a result, many people are interested in current estimates of the value of an average parcel of ground for their county. Since Kansas is a non-disclosure state, there is very little publicly available information people may use for determining county-average land values.

In an attempt to improve the amount of land value information available, the Kansas Property Valuation Department (PVD) provides K-State with data on agricultural land sales.¹ These data reflect agricultural land sales in Kansas from 2015 through 2019. To obtain estimates that reflect land sold for agricultural purposes in an “arm’s-length” transaction, some observations were removed from the original dataset.² The sales data used in the analysis were limited to bare land (undeveloped) parcels of at least 40 acres in size. These filtered data were used in a regression analysis to estimate county-specific land (non-irrigated, irrigated, and pasture) values, referred to as KSU-PVD. The land-value model used characteristics of the parcels sold to determine impacts on price. Characteristics such as parcel size, growing season rainfall and temperature averages, soil characteristics (e.g. slope, percentage of sand, silt, and clay), percent of pasture and cropland within a parcel, and when a parcel was sold were all used to estimate county-level land values.

The county-level estimates and the average for each of the Crop Reporting Districts (CRD) are shown in Table 1, where the CRD average is a simple average of the counties that fall within the region. Table 2 provides a comparison between the 2018 estimates using PVD data and the 2019 land value estimates at the CRD level. Land values stayed relatively steady between 2018 and 2019 for pasture across the state while non-irrigated and irrigated cropland fell. Statewide, non-irrigated land decreased 7.6% between 2018 and 2019. Irrigated cropland across the state decreased by 17.3% between 2018 and 2019 and pasture decreased by 1.0% during the same period. A comparison of K-State estimates and survey estimates from USDA are shown in Figure 1 for non-irrigated cropland and Figure 2 for pasture.

¹ The author would like to thank Leah Tsoodle (Kansas State University) and Jim Shontz (Property Valuation Department) and others for their assistance with data collection and interpretation.

² “Arm’s-length” refers to land sold through typical market channels and does not include intra-family transactions, court-ordered sales, or other transactions that may keep the sale from being considered a market-based transaction.

Irrigated cropland values are not reported for all counties. For statistical accuracy of the county-level estimates, a minimum number of land sales must be observed in a county. Counties with less than 10 observed sales of irrigated land over the period 2015 to 2019 are not presented in the table. As a result, irrigated land values at the CRD level are not reported for the Central, North Central, and three Eastern regions of the state. It should be noted that irrigated land values are relatively difficult to estimate due to fewer overall sales occurring as compared to non-irrigated and pasture land sales.

Another source of land value data is the U.S. Department of Agriculture's National Agricultural Statistics Service (USDA-NASS), who report state average values for irrigated, non-irrigated, and pasture land. These values are based upon an annual survey of agricultural producers and landowners asking for their estimate of the market value of cropland and pasture land they own or operate. Figures 1 and 2 show the state-level estimates of land values from USDA-NASS for non-irrigated cropland and pasture from 2015 to 2019. The USDA-NASS land values estimates are consistently lower than the market-based KSU-PVD estimates. However, the relationship is relatively stable and the consistency between the two methods suggests that both methods capture the trends in a similar manner, but level differences between the two must be taken into account when referring to the data.

The total number of sales reported, by year, for the state is presented in Figure 3. Sales transactions were at a low for the period in 2016 and have been recovering each year since then. The decrease in sales transactions for 2019 may be a result of fewer parcels offered for sale (a supply side issue) or a decrease in willingness to buy land at current market prices (a demand side issue). In either case, where the market goes in 2020 will be a function of both the supply and demand for land and the profitability in the crop and livestock sectors. If commodity prices for the main crops grown in Kansas improve, land values are likely to follow. However, if commodity prices stay low, land values will be either flat or down slightly in 2020.

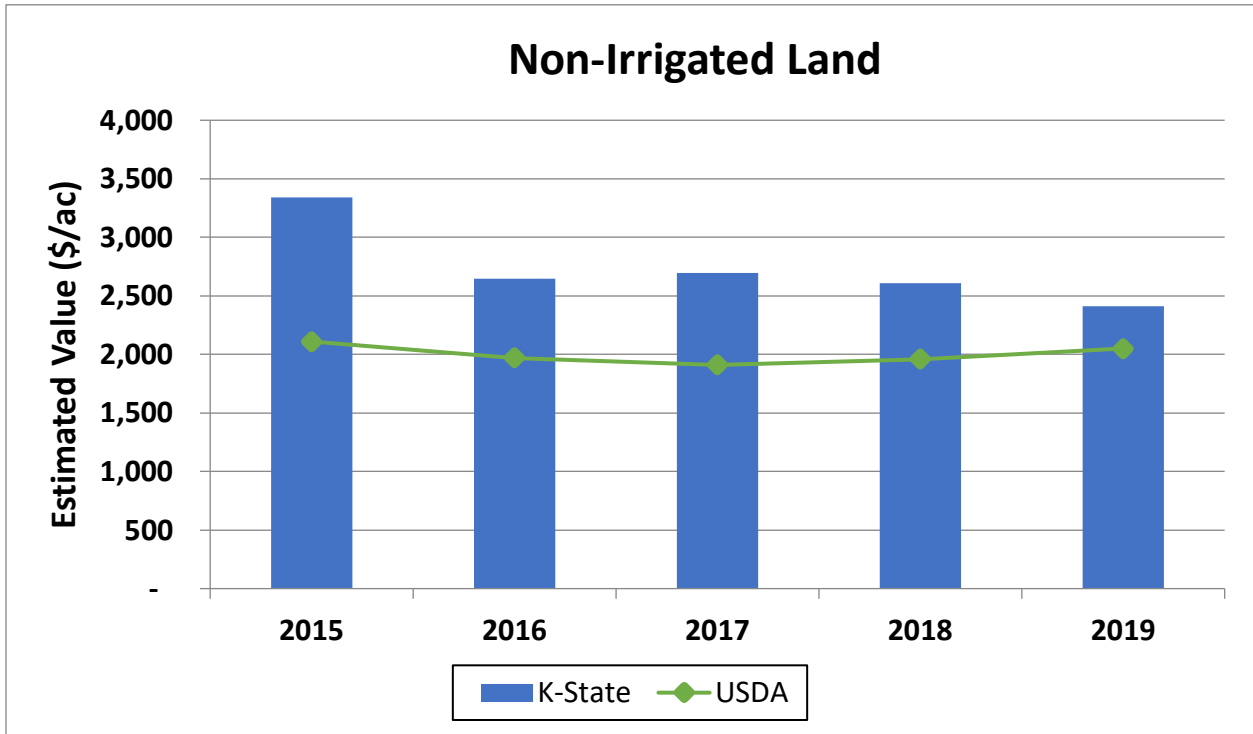


Figure 1. Average Kansas Land Value Estimates by K-State (2015 – 2019)

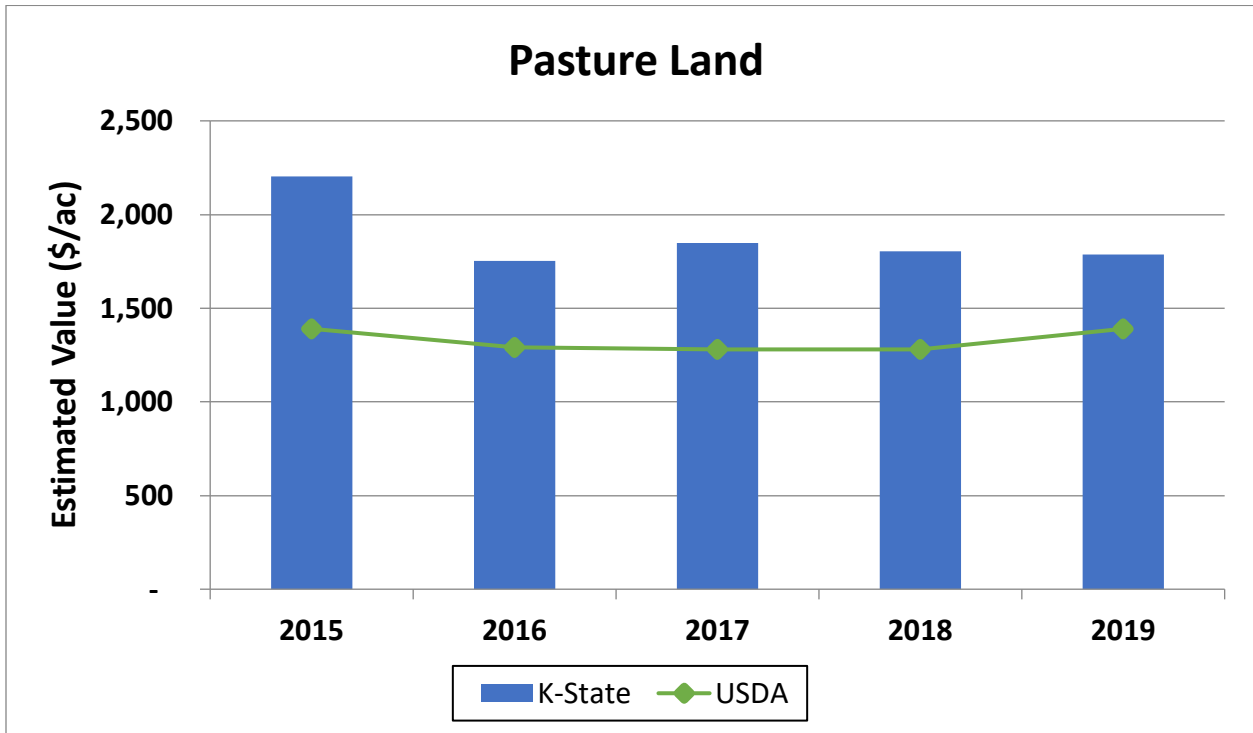


Figure 2. Average Kansas Land Value Estimates by USDA-NASS (2015 – 2019)

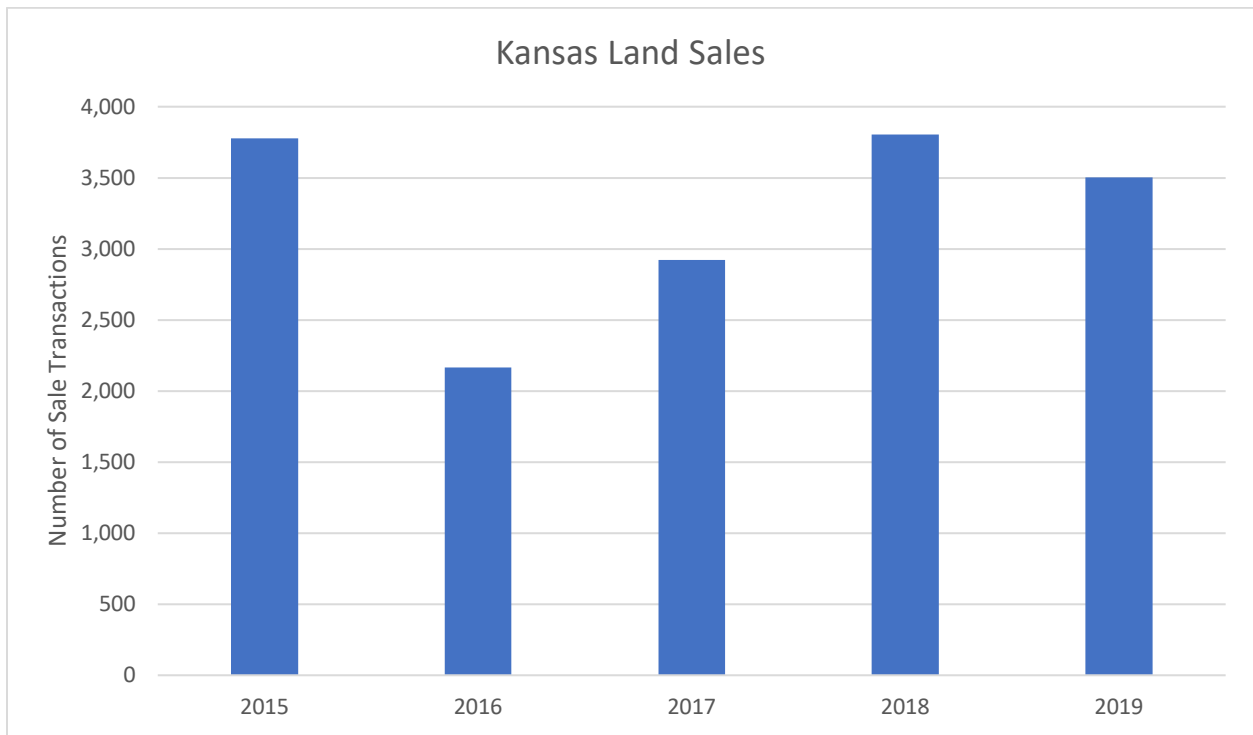


Figure 3. Number of Land Sale Transactions (2015 – 2019)

Table 1. Estimated Agricultural Land Values for 2019 using PVD Land Sales Data

CRD	County	Non-Irrigated, \$/ac	Irrigated, \$/ac	Pasture, \$/ac	CRD	County	Non-Irrigated, \$/ac	Irrigated, \$/ac	Pasture, \$/ac	CRD	County	Non-Irrigated, \$/ac	Irrigated, \$/ac	Pasture, \$/ac	
Northwest	Cheyenne	1,663	3,246	1,233	North	Clay	2,730	--	2,024	Northeast	Atchison	4,407	--	3,267	
	Decatur	2,013	3,929	1,492		Central	Cloud	2,585	--		1,917	Brown	3,890	--	2,884
	Graham	2,080	4,059	1,542			Jewell	2,427	--		1,799	Doniphan	4,123	--	3,056
	Norton	2,241	4,375	1,662			Mitchell	2,371	--		1,757	Jackson	4,273	--	3,168
	Rawlins	1,941	3,789	1,439			Osborne	2,186	--		1,620	Jefferson	4,846	--	3,593
	Sheridan	1,966	3,836	1,457			Ottawa	2,440	--		1,809	Leavenworth	6,136	--	4,549
	Sherman	1,624	3,170	1,204			Phillips	2,073	--		1,537	Marshall	3,534	--	2,620
	Thomas	1,865	3,639	1,382			Republic	2,771	--		2,054	Nemaha	3,767	--	2,792
					Rooks		2,009	--	1,489	Pottawatomie	3,867	--	2,866		
					Smith	2,176	--	1,613	Riley	4,179	--	3,098			
					Washington	3,009	--	2,231	Wyandotte	--	--	--			
	Average:	1,924	3,755	1,426		Average:	2,434	1,805		Average:	4,302	3,189			
West	Gove	1,616	3,154	1,198	Central	Barton	2,161	--	1,602	East	Anderson	3,079	--	2,283	
	Central	Greeley	1,365	2,665		1,012	Dickinson	2,801	--		2,076	Chase	2,261	--	1,676
		Lane	1,553	3,031		1,151	Ellis	1,905	--		1,412	Coffey	2,960	--	2,194
		Logan	1,447	2,824		1,073	Ellsworth	2,069	--		1,534	Douglas	4,752	--	3,523
		Ness	1,681	3,281		1,246	Lincoln	2,175	--		1,613	Franklin	3,245	--	2,406
		Scott	1,549	3,024		1,149	Marian	3,039	--		2,253	Geary	2,850	--	2,113
		Trego	1,734	3,383		1,285	McPherson	2,784	--		2,064	Johnson	--	--	--
		Wallace	1,312	2,561		973	Rice	2,272	--		1,684	Linn	3,191	--	2,366
Wichita		1,462	2,853	1,084	Rush	1,840	--	1,364	Lyon	2,909	--	2,156			
					Russell	1,947	--	1,443	Miami	3,547	--	2,630			
					Saline	2,726	--	2,021	Morris	2,531	--	1,876			
									Osage	2,913	--	2,159			
									Shawnee	4,823	--	3,575			
									Wabaunsee	2,520	--	1,868			
	Average:	1,524	2,988	1,130		Average:	2,338	1,733		Average:	3,198	2,371			
Southwest	Clark	1,231	2,402	912	South	Barber	1,627	3,175	1,206	Southeast	Allen	2,626	--	1,947	
	Finney	1,210	2,362	897		Central	Comanche	1,489	2,907		1,104	Bourbon	2,742	--	2,033
	Ford	1,399	2,731	1,037			Edwards	1,726	3,369		1,280	Butler	2,069	--	1,534
	Grant	1,136	2,216	842			Harper	2,062	4,024		1,529	Chautauqua	2,170	--	1,609
	Gray	1,304	2,544	966			Harvey	2,886	5,632		2,139	Cherokee	2,872	--	2,129
	Hamilton	950	1,854	704			Kingman	2,143	4,183		1,589	Cowley	1,961	--	1,454
	Haskell	1,174	2,291	870			Kiowa	1,685	3,289		1,249	Crawford	3,001	--	2,224
	Hodgeman	1,302	2,541	965			Pawnee	1,687	3,293		1,251	Elk	2,317	--	1,718
	Kearny	1,111	2,169	824			Pratt	1,861	3,632		1,380	Greenwood	2,171	--	1,609
	Meade	1,108	2,162	821			Reno	2,355	4,596		1,746	Labette	2,684	--	1,990
	Morton	1,108	2,163	822			Sedgwick	5,833	--		4,324	Montgomery	2,683	--	1,989
	Seward	1,099	2,145	815			Stafford	1,910	3,727		1,416	Neosho	2,796	--	2,073
	Stanton	1,074	2,096	796			Sumner	2,586	5,048		1,917	Wilson	2,531	--	1,876
Stevens	1,108	2,163	822						Woodson	2,464	--	1,827			
	Average:	1,165	2,274	864		Average:	2,296	3,906	1,702	Average:	2,506	1,858			

Note: Missing estimates for irrigated values are due to insufficient observations of irrigated land sales in the previous five years.

Table 2. Estimated Average Land Values by Crop Reporting District, 2018-2019

	Crop Reporting District									State
	Northwest	West Central	Southwest	North Central	Central	South Central	Northeast	East Central	Southeast	
Non-Irrigated										
2018	1,877	1,623	1,138	2,622	2,497	2,370	4,687	3,713	2,955	2,609
2019	1,924	1,524	1,165	2,434	2,338	2,296	4,302	3,198	2,506	2,410
Difference, \$/ac	47	-99	27	-188	-159	-74	-385	-515	-449	-199
Difference, %										-7.6%
Irrigated										
2018	4,503	3,836	2,889	--	--	4,392	--	--	--	3,905
2019	3,755	2,988	2,274	--	--	3,906	--	--	--	3,231
Difference, \$/ac	-747	-849	-614	--	--	-486	--	--	--	-674
Difference, %										-17.3%
Pasture										
2018	1,299	1,123	787	1,814	1,728	1,640	3,243	2,569	2,045	1,805
2019	1,426	1,130	864	1,805	1,733	1,702	3,189	2,371	1,858	1,787
Difference, \$/ac	127	7	77	-9	5	62	-54	-198	-187	-18
Difference, %										-1.0%

Note: Values for 2018 may vary from previous publications of this bulletin due to updates in available data at the parcel level.