



2018 Kansas County-Level Land Values for Cropland and Pasture

April 2019 (available at www.AgManager.info)

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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 2014 through 2018. 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 2017 estimates using PVD data and the 2018 land value estimates at the CRD level. Land values fell between 2017 and 2018 for all cropland (non-irrigated and irrigated) and pasture across the state. Statewide, non-irrigated land decreased 3.1% between 2017 and 2018. Irrigated cropland across the state decreased by 5.5% between 2017 and 2018 and pasture decreased by 2.4% during the same period. The change in value at the state level are shown in Figure 1.

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 2018 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. Figure 2 shows the state-level estimates of land values from USDA-NASS for non-irrigated and irrigated cropland and pasture from 2014 to 2018. The USDA-NASS land values estimates are consistently lower than the market-based KSU-PVD estimates. However, the relationship is relatively stable with USDA-NASS values approximately 35% lower than KSU-PVD estimates for non-irrigated cropland and pasture and 70% lower for irrigated cropland. 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 increase in sales alongside the slight decrease in land values for 2018 suggests that demand for sales in the land market is insufficient to meet the supply available. Where the market goes in 2019 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 2019.

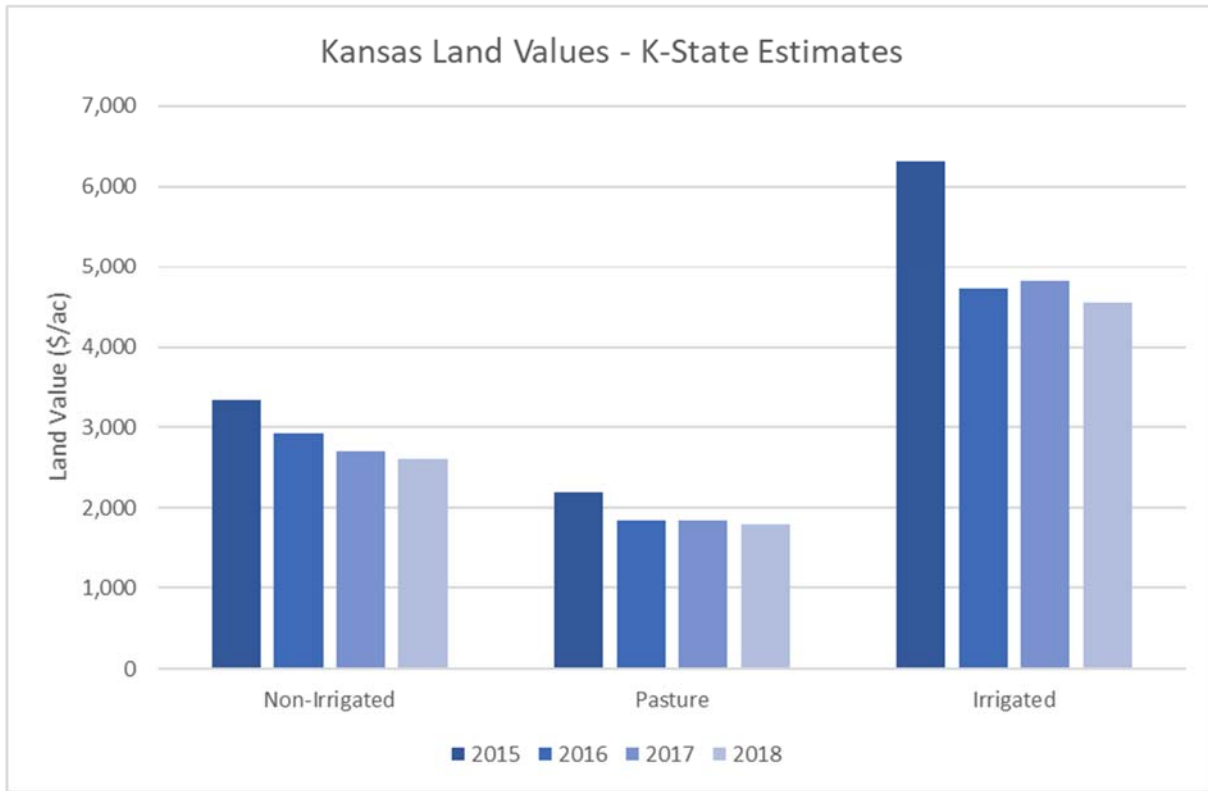


Figure 1. Average Kansas Land Value Estimates by K-State (2015 – 2018)

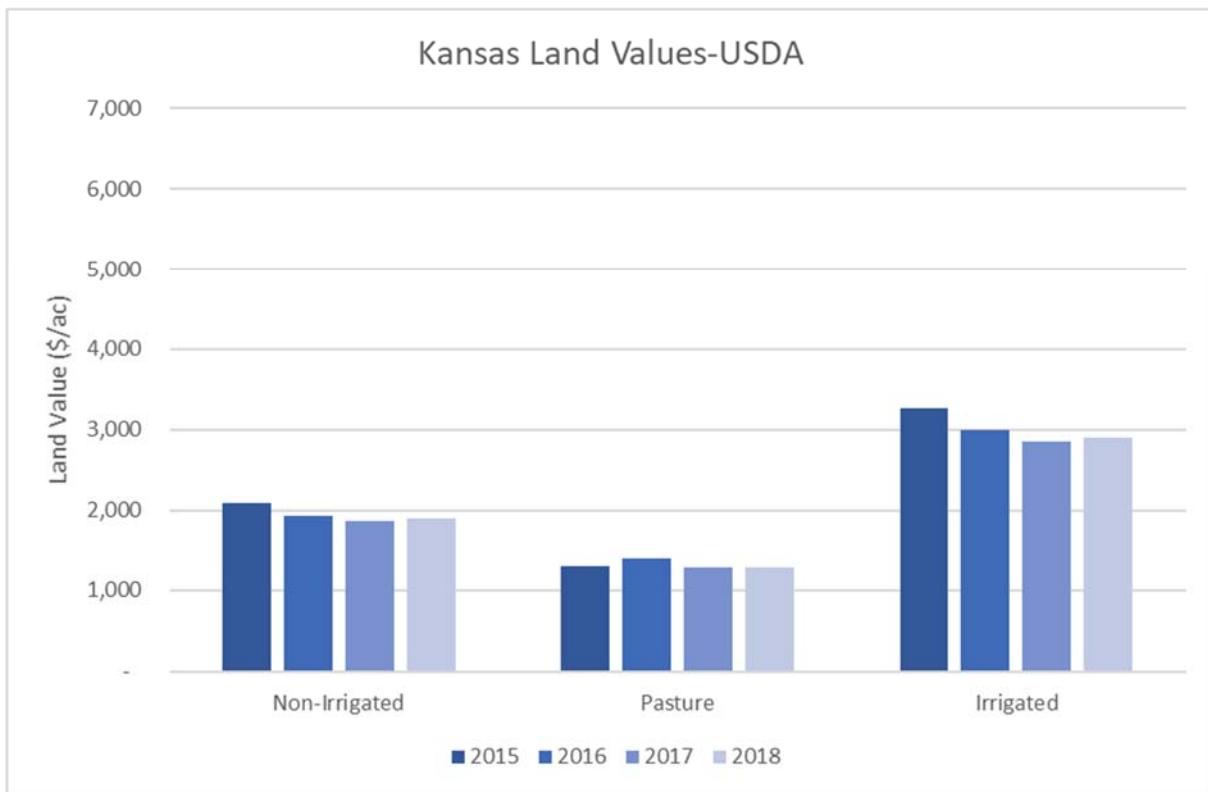


Figure 2. Average Kansas Land Value Estimates by USDA-NASS (2015 – 2018)

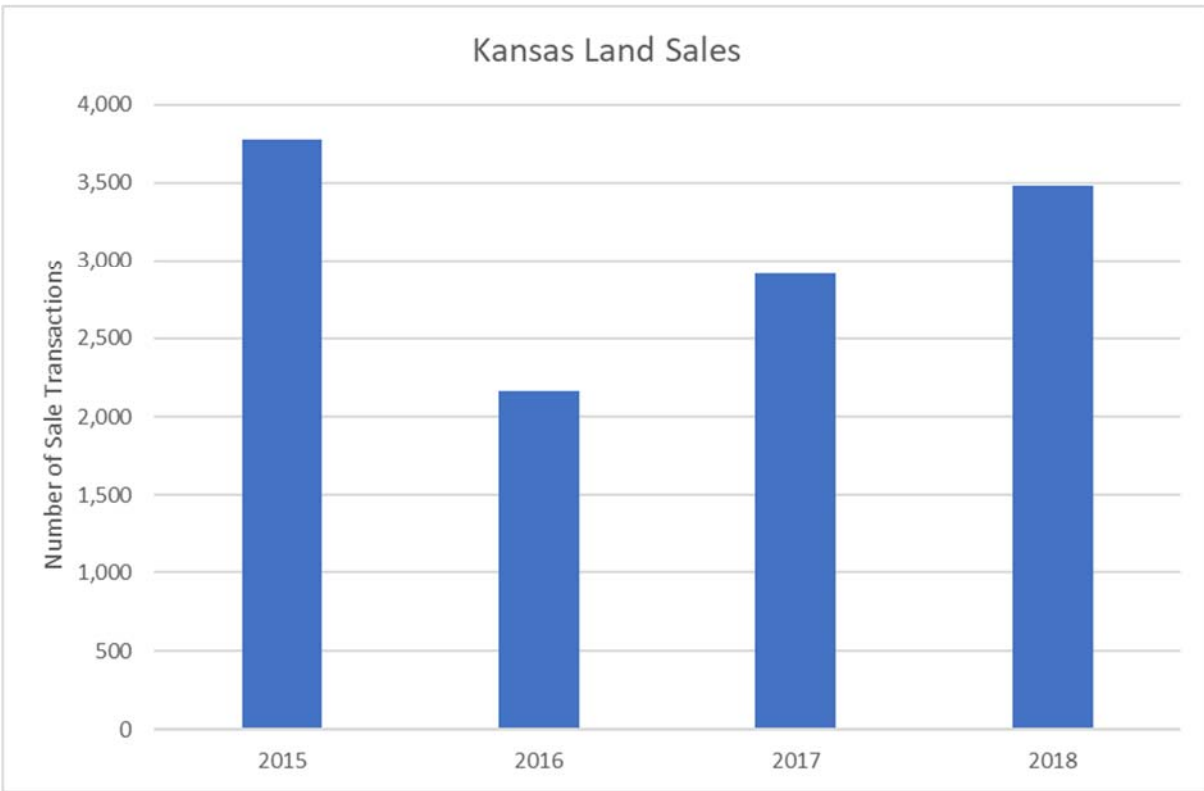


Figure 3. Number of Land Sale Transactions (2015 – 2018)

Table 1. Estimated Agricultural Land Values for 2018 using PVD Land Sales Data

CRD	County	Non-Irrigated, Irrigated, Pasture,			CRD	County	Non-Irrigated, Irrigated, Pasture,			CRD	County	Non-Irrigated, Irrigated, Pasture,			
		\$/ac	\$/ac	\$/ac			\$/ac	\$/ac	\$/ac			\$/ac	\$/ac	\$/ac	
Northwest	Cheyenne	1,636	--	1,132	North	Clay	2,909	--	2,013	Northeast	Atchison	4,810	--	3,328	
	Decatur	1,962	--	1,358		Central	Cloud	2,765	--		1,914	Brown	4,289	--	2,968
	Graham	2,028	--	1,403		Jewell	2,617	--	1,811		Doniphan	4,523	--	3,129	
	Norton	2,149	--	1,487		Mitchell	2,567	--	1,776		Jackson	4,689	--	3,245	
	Rawlins	1,894	--	1,311		Osborne	2,387	--	1,651		Jefferson	5,250	--	3,632	
	Sheridan	1,916	5,535	1,326		Ottawa	2,627	--	1,817		Leavenworth	6,442	--	4,458	
	Sherman	1,607	4,642	1,112		Phillips	2,248	--	1,556		Marshall	3,924	--	2,715	
	Thomas	1,824	5,270	1,262		Republic	2,962	--	2,049		Nemaha	4,145	--	2,868	
	Average:	1,877	5,149	1,299		Average:	2,622	1,814		Average:	4,687	3,243			
West	Gove	1,714	--	1,186	Central	Barton	2,318	--	1,604	East	Anderson	3,640	--	2,519	
Central	Greeley	1,461	--	1,011		Dickinson	2,938	--	2,033		Central	Chase	2,795	--	1,934
	Lane	1,651	--	1,142		Ellis	2,066	--	1,430		Coffey	3,470	--	2,401	
	Logan	1,557	--	1,078		Ellsworth	2,243	--	1,552		Douglas	5,253	--	3,635	
	Ness	1,758	--	1,216		Lincoln	2,342	--	1,621		Franklin	3,784	--	2,618	
	Scott	1,642	4,745	1,136		Marian	3,228	--	2,234		Geary	3,346	--	2,315	
	Trego	1,833	--	1,268		McPherson	2,938	--	2,033		Johnson	--	--	--	
	Wallace	1,430	--	990		Rice	2,434	--	1,684		Linn	3,736	--	2,585	
Wichita	1,559	--	1,079	Rush	1,996	--	1,381	Lyon	3,422	--	2,368				
	Average:	1,623	4,745	1,123		Average:	2,497	1,728		Average:	3,713	2,569			
Southwest	Clark	1,218	--	843	South	Barber	1,782	--	1,233	Southeast	Allen	3,081	--	2,132	
	Finney	1,188	3,433	822		Central	Comanche	1,634	--		1,130	Bourbon	3,201	--	2,215
	Ford	1,353	3,908	936		Edwards	1,853	5,354	1,282		Butler	2,461	--	1,703	
	Grant	1,101	3,180	762		Harper	2,179	--	1,508		Chautauqua	2,617	--	1,811	
	Gray	1,258	3,635	871		Harvey	2,966	--	2,052		Cherokee	3,347	--	2,316	
	Hamilton	959	--	663		Kingman	2,267	--	1,568		Cowley	2,373	--	1,642	
	Haskell	1,138	3,288	788		Kiowa	1,816	5,246	1,256		Crawford	3,469	--	2,400	
	Hodgeman	1,270	--	879		Pawnee	1,808	--	1,251		Elk	2,768	--	1,915	
	Kearny	1,093	3,158	756		Pratt	1,983	5,729	1,372		Greenwood	2,616	--	1,810	
	Meade	1,085	3,134	751		Reno	2,426	--	1,679		Labette	3,134	--	2,169	
	Morton	1,078	3,113	746		Sedgwick	5,362	--	3,710		Mongtomery	3,130	--	2,166	
	Seward	1,064	3,073	736		Stafford	2,032	5,872	1,406		Neosho	3,269	--	2,262	
	Stanton	1,046	3,021	724		Sumner	2,698	--	1,867		Wilson	2,980	--	2,062	
Stevens	1,077	3,110	745					Woodson	2,923	--	2,022				
	Average:	1,138	3,278	787		Average:	2,370	5,550	1,640	Average:	2,955	2,045			

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, 2017-2018

	Crop Reporting District									State
	West			North	South		East		Southeast	
	Northwest	Central	Southwest	Central	Central	Central	Northeast	Central		
Non-Irrigated										
2017	1,938	1,675	1,175	2,707	2,578	2,447	4,839	3,834	3,051	2,694
2018	1,877	1,623	1,138	2,622	2,497	2,370	4,687	3,713	2,955	2,609
Difference, \$/ac	-61	-53	-37	-85	-81	-77	-152	-121	-96	-85
Difference, %										-3.1%
Irrigated										
2017	5,451	5,023	3,470	--	--	5,876	--	--	--	4,955
2018	5,149	4,745	3,278	--	--	5,550	--	--	--	4,680
Difference, \$/ac	-302	-278	-192	--	--	-325	--	--	--	-274
Difference, %										-5.5%
Pasture										
2017	1,330	1,150	806	1,858	1,770	1,680	3,322	2,632	2,094	1,849
2018	1,299	1,123	787	1,814	1,728	1,640	3,243	2,569	2,045	1,805
Difference, \$/ac	-32	-27	-19	-44	-42	-40	-79	-63	-50	-44
Difference, %										-2.4%

Note: Values for 2017 vary from previous publications of this bulletin due to updates in available data at the parcel level.