

ANSWERS

TO COMMONLY ASKED QUESTIONS ABOUT AGRICULTURAL LAND VALUE IN KANSAS

By
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General Questions:

Who establishes the appraised value of agricultural land in Kansas?

- By law, the Director of the Division of Property Valuation of the State of Kansas is required to make a determination of agricultural land values annually.

How is agricultural land valued in Kansas?

- Valuation of agricultural land in Kansas is governed by Kansas law. The appraised value of agricultural land is based on the productive potential directly attributed to the natural capabilities of the land, **not fair market value**. Cultivated land is valued using an eight-year average of the landlord share of net income, with soil types used to recognize land productivity potential. For grassland an eight-year average of the landlord share of the net rental income is used. In the case of grassland, productivity is established by use of the grazing index assigned to each soil type. In either case the resulting eight-year average landlord net income is divided by a capitalization rate to arrive at the appraised value.

How is the inherent productive capability determined for agricultural land?

- According to K.S.A. 79-1476, “valuations shall be established for each parcel of land devoted to agricultural use upon the basis of the agricultural income or productivity attributable to the inherent capabilities of such land.” “A classification system for all land devoted to agricultural use shall be adopted by the director of property valuation using criteria established by the United States department of agriculture soil conservation service.” That system, developed by the now Natural Resource Conservation Service (NRCS), is the Soil Rating for Plant Growth (SRPG) index for each soil map unit.
- The SRPG (Soil Rating for Plant Growth) is a numerical rating system developed by NRCS soil scientists for non-irrigated cropland. The index is not tied to yields, which removes management variables. It is designed to rate each soil map unit based on its potential for supporting plant growth and indexed based on the soil’s properties.
- The KIPI (Kansas Irrigated Productivity Index) is a numerical rating system for irrigated cropland developed by Department of Agronomy at Kansas State University in cooperation with NRCS. The KIPI is designed to rank the productivity of each soil map unit.

What is the responsibility of the county appraiser concerning agricultural land?

- The county appraiser is responsible for discovering, listing, classifying and valuing all taxable property within the county in accordance with the applicable state laws in a uniform and equal manner. However as it relates to agricultural land, the county appraiser does not value this type of property but is responsible for listing each property’s correct current usage and acreage.

What are the different types of agricultural land?

Agricultural land is classified in the following usage categories:

- Dry cultivated land
- Irrigated land
- Tame grassland
- Native grassland

Capitalization Rate:

What is the capitalization rate?

- The capitalization rate is used to convert the landlord share of agricultural net income into an agricultural value. The following three components make up the capitalization rate:
 1. The five-year average of the Federal Land Bank interest rate on new loans in Kansas as of July 1 of each year.
 2. An “add on” of not less than .75% nor more than 2.75% determined by the Director of Property Valuation.
 3. As of property tax year 2003, the capitalization rate shall not be less than 11% nor more than 12% as mandated by the 2002 Kansas Legislature.
 4. The county average agricultural property tax rate. This accounts for property taxes on agricultural land as an expense.

The sum of these three components is the capitalization rate percentage that is divided into the landlord net income (LNI) to arrive at the agricultural value. The higher the capitalization rate, the lower the agricultural value. For example, a higher county average agricultural property tax rate (expense) means the final agricultural value will be lower (all other things being equal).

Why are values in some counties higher than those in surrounding counties?

Differences can be attributed to one or more of the following:

- Crop mix, (the major crops in a county).
- Differences between landlord share of income and expense ratios.
- Different agricultural cap rate. For example, a county may have an extremely low agricultural cap rate due to an electrical power generating plant, which carries a large portion of the taxes.

Native and Tame Grassland

How is the landlord net rental income determined for grassland?

- The landowners share of gross rental income is based on stocking rates (measurement of productivity) and cash rental rates developed from regional studies performed by Kansas Agricultural Statistics, the Natural Resources Conservation Service and Kansas State University.
- The landlord shares of expenses are based on survey information collected by Kansas Agricultural Statistics and Kansas State University. Expenses included are; fencing and fence maintenance, pasture spraying and maintenance and watering cost.
- The landlord share of gross rental income less the landlord share of expenses (including a 10% management fee) equals the landlord share of net rental income.

Dryland:

How is the landlord net income determined for dryland?

- Using information from Kansas Agricultural Statistics, the landlord share of gross income is based upon the yields and prices of the primary crops grown in the county or region. Yields are based on planted acres and adjusted for summer fallow where applicable. Prices are based on the monthly average price weighted by the amount crop sold per month. Each of the primary crops are then weighted within the county to determine crop composition or “crop mix”.
- The landlord share of expenses are weighted by the crop mix factors within the county. The expense data is based on planted acres and survey information collected by Kansas Agricultural Statistics and Kansas State University.
- The landlord share of gross income less the landlord share of expenses (including a 10% management fee) equals the landlord net income.
- The eight-year average of the landlord net incomes are capitalized into value.

Irrigated Land:

How is the landlord net income determined for irrigated land?

- Using information from Kansas Agricultural Statistics the landlord share of gross income is based on yields of primary crop harvested acres. Each of the primary crops is then weighted within the district to determine crop mix.
- The landlord share of expenses is based on planted acres and is also weighted within the district. Kansas Agricultural Statistics and Kansas State University collect the expense data. Expenses are also weighed by the crop mix.
- The landlord share of gross income less the landlord share of expenses (including a 10% management fee) equals the landlord net income.
- Well depths are taken into consideration through irrigation equipment and fuel pumping costs.
- A water ratio table is used to adjust for water limitations.

Counties in the east irrigate; why don't they have separate values?

- These counties are in the one-acre-foot region of water, and irrigation is an insurance against dry periods.
- The irrigated values used in the east are a percentage increase of dryland values in the county and will change as dryland values in the county change

Why is irrigation valued on a district basis?

- It prevents massive value swings across county lines.
- It creates uniformity across county lines.
- Irrigation tends to lessen the effects of climate, allowing larger geographic areas to have approximately the same productivity.

Why is there still so much variability where the irrigation districts meet?

Variability can be attributed to differences in one or more of the following:

- crop mix,
- ownership of the sprinkler,
- ratio of flood and pivot acres in the district,
- district average yields,
- landlord share of net income,
- county agricultural tax rates, and
- differences between counties in the 2 acre-feet region and counties in the 1½ acre-feet region.

Changes in Landlord Net Incomes for 2017 Ag Values

Nonirrigated:

The 8 year average LNI increased in one hundred-three of the 105 counties; Grant and Morton had small decreases. Changes ranged from \$18.34 in Doniphan to \$-0.33 in Grant; the average change was \$4.63; changes in northeast Kansas were the highest, between \$9.94 and \$18.34.

Crop prices, other than wheat and sorghum, increased across the state. Landlord share changed from 33% to 40% in NC-40 and from 50% to 40% in NE-70. Wheat price decreased, and sorghum was essentially unchanged. In the western third of the state, yields decreased generally, except sorghum in some counties. Generally, wheat yields tended to increase in the central third of the state; corn and sorghum yields decreased in many counties in that region. Most crop yields increased in the eastern third of the state; however, in some counties, corn, sorghum and soybean yields declined. Most counties in the western districts increased wheat and decreased sorghum, corn, or soybean acreage. Most of the central region counties moved from wheat to corn and soybeans; some increased sorghum acreage. Generally, counties in the eastern third of the state shifted from wheat to corn and soybeans. Expenses decreased in all counties in NW-10 and NE-70. Expenses increased in all counties in WC-20, NC-40, C-50, SC-60, and EC-80. Expenses increased in some counties and decreased in other in SW-30 and SE-90.

NW-10 Average 2015 LNI increased in four counties and decreased in four counties. Overall: yields decreased, except wheat in Norton, sorghum in Sheridan, corn in Sherman, and sunflowers in Thomas. All prices increased, except wheat and sunflowers. Wheat price went down, and sunflowers was unchanged. The crop mix moved to wheat and sorghum from corn or soybeans.

WC-20 Average 2015 LNI decreased in all counties. Overall: yields decreased, except for corn in Logan and wheat in Trego; all prices increased, except wheat. The crop mix moved generally to wheat from sorghum or corn, except in Greeley and Scott, which increased corn and decreased wheat and sorghum.

SW-30 Average 2015 LNI decreased in all counties, except Clark and Ford. Overall: yields decreased in all crops in Grant, Hodgeman, Kearney, Stanton, and Stevens. Sorghum yield increased in Clark, Finney, Gray, Haskell, and Meade; wheat yield decreased in all counties, except Ford; corn yields increased in Gray, Hamilton, Haskell, Morton, and Seward; alfalfa yield increased in Meade. All prices increased, except wheat. The crop mix shifted from sorghum to wheat, except in Clark, Hamilton, and Stanton, which moved to sorghum from wheat. Stevens moved from wheat and sorghum to corn.

NC-40 Average 2015 LNI increased in all counties. Overall: yields increased in all counties, except corn, sorghum, and soybeans in some counties. Corn yields decreased in Mitchell, Osborne, Republic, and Smith; sorghum and soybean yields decreased in Osborne, Phillips, Rooks, and Smith. Prices increased for all crops, except wheat. The crop mix shifted out of wheat and sorghum in all counties, except Mitchell. Most counties increased corn and soybean acreage.

- C-50 Average 2015 LNI decreased in all counties, except McPherson, Rice, and Saline. Overall: wheat yields increased in all counties; alfalfa yield increased in Marion; sorghum and soybean yields increased in Rice and Saline, and sorghum yield increased in Rush. Other crop yields decreased. All prices increased, except wheat. Most counties decreased wheat and/or sorghum and increased corn and/or soybeans, except Dickinson and Russell. Acreage moved into wheat and sorghum from corn in Dickinson and soybeans in Russell. Saline also increased alfalfa acreage.
- SC-60 Average 2015 LNI decreased in all counties. Overall: in all counties, wheat yields increased, and corn yields decreased; sorghum yields increased, except in Harper, Harvey, Kingman, Pawnee, and Reno. Soybean yields increased, except in Edwards and Harper. Alfalfa yields increased or were unchanged. Prices increased, except wheat and sorghum. Wheat price declined, and sorghum price was unchanged. Edwards, Kiowa, and Pawnee moved from sorghum to wheat acreage; Barber and Kingman did the opposite. Other counties moved from wheat to corn and soybeans or alfalfa.
- NE-70 Average 2015 LNI increased in all counties, except Nemaha. Overall: wheat yields increased, except in Marshall and Nemaha; corn yields increased in all counties; sorghum yields increased, except in Atchison, Brown, and Pottawatomie; soybean yields decreased only in Brown, Marshall, and Nemaha; and alfalfa yields were generally unchanged. Prices increased, except for wheat and sorghum. Wheat price declined, and sorghum price was unchanged. Most counties moved from corn and soybeans into wheat acreage, except Marshall, which moved out of wheat to those crops. Riley moved to alfalfa acreage from all other crops. Atchison moved from soybeans to corn, and Doniphan did the opposite. Jackson moved from wheat and soybeans to corn.
- EC-80 Average 2015 LNI decreased in all counties. Overall: most yields increased, except for sorghum in eight counties and corn in Lyon. Prices increased, except for wheat and sorghum. Wheat price declined, and sorghum price was unchanged. All counties, except Geary, decreased wheat acreage; all counties, except Chase, Geary, Miami, and Wabaunsee, increased corn and soybeans. Chase decreased corn; Geary moved from sorghum to wheat, corn, and soybeans; Miami moved from wheat and corn into soybeans; and Wabaunsee moved from wheat, corn, and soybeans into sorghum.
- SE-90 Average 2015 LNI decreased in eight counties and increased in six. Overall: yields increased, except for sorghum in seven counties, alfalfa in two counties, and corn in Greenwood. Prices increased, except for wheat and sorghum. Wheat price declined, and sorghum price was unchanged. All counties, except Allen, Bourbon, Butler, and Woodson, moved from wheat and corn into soybean acreage; those four counties decreased wheat and increased corn and soybeans.

Irrigated

Weighted average LNI for irrigated crop land increased in all districts, except WC-20. Weighted LNI changes ranged from 35.80 to -2.48. Average annual LNI increased in all six districts. Changes ranged from 5.36 to 32.13. Yields increased in the central districts, except sorghum and soybeans in C-50. Wheat and sorghum yields decreased in NW-10 and SW-30; wheat and soybeans decreased in WC-20. Prices increased statewide for all crops, except wheat and sorghum. Wheat price decreased, and sorghum price was unchanged. WC-20, C-50, and SC-60 moved from wheat and corn to sorghum and soybeans. NW-10 moved from corn to wheat and soybeans; SW-30 moved from wheat, sorghum, and corn to alfalfa; NC-40 moved from corn to soybeans. Expenses decreased in all districts.

Pasture

NATIVE: Weighted average LNI for native pasture increased in eight of the nine districts, ranging from 1.09 to -0.08. Average annual LNI changes ranged from 1.22 to 0.18. Cash rent increased in all districts; the largest change was a \$1.29 increase in NE-70. Fence costs increased in all districts; watering costs remained at \$0.60.

TAME: Weighted average LNI for tame pasture increased in all districts, ranging from 1.32 to 0.44. Annual LNI changes ranged from 1.48 to 0.48. Cash rent increased in all districts; changes ranged from 1.60 to 0.59. Fence costs increased in all districts. Watering costs remained at \$0.60.

LAND USE-VALUE DATA
WEIGHTED ANNUAL PRICES RECEIVED BY FARMERS
BY Crop Reporting District
FOR: 2017 VALUES (2015)

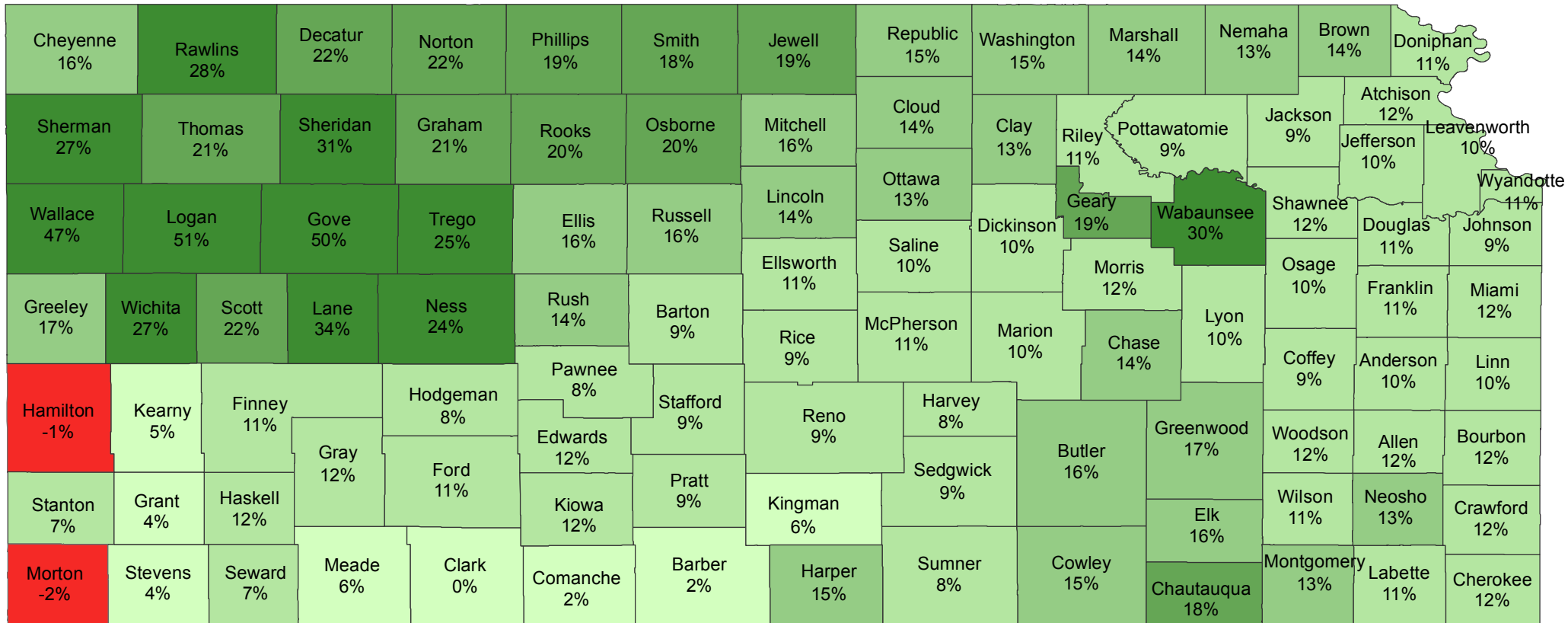
SOURCES: "Prices Received by Farmers"
 Kansas Agricultural Statistics

DISTRICT	CROP	YEAR	ANNUAL PRICE (\$/TON)	DISTRICT	CROP	YEAR	ANNUAL PRICE (\$/BU)	DISTRICT	CROP	YEAR	ANNUAL PRICE (\$/BU)
STATE	ALFALFA	2015	\$124.91	NC-40	WHEAT	2015	\$4.91	NC-40	SOYBEANS	2015	\$8.59
		2014	\$174.64			2014	\$6.30			2014	\$10.64
		2013	\$216.63			2013	\$7.12			2013	\$12.99
		2012	\$219.10			2012	\$7.41			2012	\$13.33
		2011	\$168.60			2011	\$7.18			2011	\$11.61
		2010	\$111.36			2010	\$5.05			2010	\$10.32
		2009	\$113.06			2009	\$5.18			2009	\$9.51
		2008	\$120.97			2008	\$7.47			2008	\$12.85
			<hr/>				<hr/>				<hr/>
			\$156.16				\$6.33				\$11.23
			(\$/LB)								
STATE	SUNFLOWERS	2015	\$0.215	NC-40	SORGHUM	2015	\$3.56	NC-40	CORN	2015	\$3.65
		2014	\$0.227			2014	\$3.97			2014	\$3.91
		2013	\$0.245			2013	\$5.35			2013	\$5.60
		2012	\$0.295			2012	\$6.44			2012	\$6.62
		2011	\$0.310			2011	\$5.91			2011	\$5.84
		2010	\$0.139			2010	\$3.92			2010	\$3.95
		2009	\$0.165			2009	\$3.06			2009	\$3.47
		2008	\$0.238			2008	\$4.02			2008	\$4.50
			<hr/>				<hr/>				<hr/>
			\$0.2292				\$4.53				\$4.69

Agricultural Land Base Value Comparison 2016 - 2017

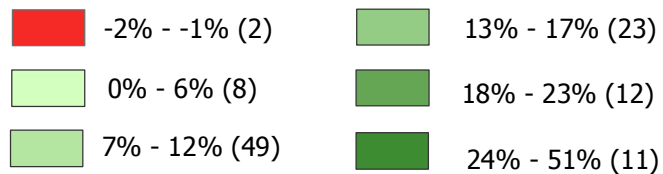
District	County	Land Use	% Acres		% Acres	2016	2017	Overall %	Weighted
			in	Well	for Well	Wt Avg	Wt Avg	Change	%
			County	Depth	Depth	Value (11.00)	Value (11.00)	2016 to 2017	Change
North Central	Clay	Native Grass	36%			\$69	\$73	7%	
		Tame Grass	2%			\$99	\$100	1%	
		Dry Land	58%			\$361	\$422	17%	
		Irrigated Land	4%	100	100.0%	\$656	\$752	15%	13%
	Cloud	Native Grass	38%			\$64	\$72	13%	
		Tame Grass	3%			\$67	\$72	7%	
		Dry Land	54%			\$313	\$359	15%	
		Irrigated Land	6%	100	82.3%	\$631	\$717	14%	14%
	Jewell	Native Grass	35%			\$31	\$38	22%	
		Tame Grass	2%			\$31	\$38	22%	
		Dry Land	61%			\$323	\$377	17%	
		Irrigated Land	2%	100	100.0%	\$652	\$747	15%	19%
	Mitchell	Native Grass	27%			\$33	\$40	21%	
		Tame Grass	0%			\$33	\$40	21%	
		Dry Land	72%			\$288	\$329	14%	
		Irrigated Land	2%	100	100.0%	\$682	\$779	14%	16%
	Osborne	Native Grass	47%			\$27	\$34	25%	
		Tame Grass	0%			\$27	\$34	25%	
		Dry Land	51%			\$118	\$136	15%	
		Irrigated Land	2%	100	100.0%	\$696	\$796	14%	20%
	Ottawa	Native Grass	45%			\$66	\$74	12%	
		Tame Grass	2%			\$67	\$74	10%	
		Dry Land	52%			\$284	\$321	13%	
		Irrigated Land	1%	100	74.1%	\$685	\$783	14%	13%
	Phillips	Native Grass	51%			\$35	\$42	20%	
		Tame Grass	0%			\$35	\$42	20%	
		Dry Land	47%			\$214	\$252	18%	
		Irrigated Land	1%	100	100.0%	\$671	\$767	14%	19%
	Republic	Native Grass	27%			\$65	\$74	14%	
		Tame Grass	3%			\$65	\$74	14%	
		Dry Land	55%			\$359	\$417	16%	
		Irrigated Land	15%	100	83.0%	\$621	\$696	12%	15%
	Rooks	Native Grass	47%			\$31	\$39	23%	
		Tame Grass	0%			\$31	\$39	23%	
		Dry Land	53%			\$171	\$200	17%	
		Irrigated Land	0%	100	100.0%	\$724	\$824	14%	20%
	Smith	Native Grass	40%			\$32	\$38	20%	
		Tame Grass	0%			\$32	\$38	20%	
		Dry Land	58%			\$265	\$311	17%	
		Irrigated Land	2%	100	100.0%	\$649	\$738	14%	18%
	Washington	Native Grass	42%			\$65	\$73	12%	
		Tame Grass	3%			\$100	\$101	0%	
		Dry Land	53%			\$366	\$429	17%	
		Irrigated Land	2%	100	69.4%	\$648	\$741	14%	15%

Agricultural Land Values Change from 2016 to 2017



The data used in this map comes from Division of Property Valuation.

Legend Percent Change (# of Counties)



Map #AG17-002

Date Map Created: 2/28/2017