

ANSWERS

TO COMMONLY ASKED QUESTIONS ABOUT
AGRICULTURAL LAND VALUE
IN KANSAS

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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 KUPI (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 KUPI 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-feet 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 2014 Ag Values

Nonirrigated:

All of the 105 counties increased. Increases ranged from \$14.23 in Doniphan to \$0.52 in Cowley; the average change was \$3.79; changes in northeast Kansas were the highest, tending to be over \$6.00.

All crop prices increased across the state. In the eastern two-thirds of the state, yields, except wheat, decreased generally. Both sorghum and wheat yields tended to increase in the western third of the state, while other crop yields fell. Declining yields, expected from the drought conditions, are partially mitigated due to the change in the fallowing procedure. The western third of the state shifted their crop mix from wheat and sorghum to corn. Districts C-50, SC-60, NE-70, and EC-80 moved from other crops to wheat. NC-40 shifted to corn and soybeans from sorghum and alfalfa; SE-90 shifted away from sorghum and soybeans into wheat, corn, and alfalfa. Expenses increased in all counties on all crops.

- NW-10 Average LNI increased in all counties, ranging from 3.15 to 5.25. Overall, yields increased, except for corn and sunflowers; all prices increased. The crop mix moved from wheat, sorghum, and sunflowers to corn.
- WC-20 Average LNI increased in all counties, ranging from 2.28 to 4.22. Overall: yields decreased, except for wheat in all counties and sorghum in Govc; all prices increased. The crop mix moved from wheat to sorghum and corn.
- SW-30 Average LNI increased in all counties, ranging from 1.40 to 3.26. Overall: yields, except wheat in all counties and soybeans in Haskell, decreased, and all prices increased. The crop mix moved from wheat and sorghum to corn, except in Trego.
- NC-40 Average LNI increased in all counties, ranging from 2.10 to 6.34. Overall: yields decreased, except wheat in all counties and sorghum in Smith. Prices increased, and the crop mix did not change much other than small movements from sorghum to other crops.
- C-50 Average LNI increased in all counties, ranging from 2.94 to 3.76. Overall: other than wheat, yields decreased. All prices increased, and the crop mix generally moved to wheat from other crops.
- SC-60 Average LNI increased in all counties, ranging from 0.72 to 2.12. Overall: yields decreased except sorghum in Barber, alfalfa in Pawnee, and wheat in all counties. Prices increased, and the crop mix generally moved to wheat, except in Kiowa and Pawnee, from other crops.
- NE-70 Average LNI increased in all counties, ranging from 6.31 to 14.23. Overall: yields decreased, except wheat. Prices increased, and the crop mix generally moved to wheat from other crops.

EC-80 Average LNI increased in all counties, ranging from 3.09 to 5.82. Overall: yields decreased, except wheat. All prices increased, and the crop mix generally moved from other crops to wheat.

SE-90 Average LNI increased in all counties, ranging from .052 to 3.58. Overall: yields decreased, except for wheat and alfalfa; prices increased for all crops. The crop mix moved from sorghum and soybeans to alfalfa, corn, and wheat.

Pasture

NATIVE: Average LNI for native pasture increased in most districts except SW-30, SC-60, and EC-80. Cash rent increased in all districts; the largest change was a \$1.00 increase in NE-70. Fence costs increased in all districts; watering costs were unchanged at \$1.00.

TAME: Average LNI for tame pasture increased in all districts, except C-50. Cash rent increased in all districts; changes ranged from 0.13 to 0.99. Fence costs increased in all districts, and watering costs were unchanged at \$1.00.

Irrigated

Weighted average LNI for irrigated crop land increased in all districts at all well depths. Weighted LNI changes ranged from 11.28 to 23.41. Average annual LNI increased in all districts, ranging from 14.06 to 28.29. Wheat yields increased in all districts. Sorghum yields increased, except in WC-20 and C-50. Corn yields decreased in all districts. Soybean yields decreased, except in NW-10 and NC-40. Alfalfa yields were unchanged, except in SW-30 where yield decreased. Prices increased statewide for all crops. In NW-10 and WC-20, the crop mix moved away from wheat and soybeans to corn; the crop mix in SW-30 moved from wheat, corn, and alfalfa to sorghum; and in the central districts, crop mix moved to wheat and soybeans, in NC-40, from corn and sorghum. Expenses increased in all districts.

2014 Irrigated Changes Specifically

- Change in methodology from **Gallons per Minute to Acre Feet per Acre.**
Acre Feet per Acre directly captures the amount of water available for crop production whereas using GPM was only a way to estimate quantity of water.

- **Updated Water Ratio Table**
The Water Ratio Table increases or decreases land values based on an individual's water use. It has been over 10 years since the Water Ratio Table has been modified and the update reflects changes in the regional crop mix.

Agricultural Land Base Value Comparison 2013-2014

District	County	Land Use	% Acres	Well Depth	% Acres	2012	2013	2014	Overall %	Weighted	
			in County		for Well Depth	Wt Avg Value (11.00)	Wt Avg Value (11.00)	Wt Avg Value (11.00)	Change 2013 to 2014	% Change	
North Central	Clay	Native Grass	36%			\$47	\$50	\$52	4%		
		Tame Grass	2%			\$72	\$84	\$96	14%		
		Dry Land	58%			\$206	\$234	\$269	15%		
		Irrigated Land	4%	100	100.0%	\$357	\$415	\$497	20%	11.3%	
	Cloud	Native Grass	33%			\$37	\$39	\$41	6%		
		Tame Grass	3%			\$44	\$53	\$63	18%		
		Dry Land	60%			\$197	\$215	\$242	13%		
		Irrigated Land	5%	100	82.3%	\$343	\$399	\$476	19%	10.9%	
		Jewell	Native Grass	35%			\$21	\$21	\$20	-2%	
			Tame Grass	2%			\$21	\$21	\$20	-2%	
	Dry Land		61%			\$190	\$214	\$245	14%		
		Irrigated Land	2%	100	100.0%	\$368	\$424	\$499	18%	8.6%	
		Mitchell	Native Grass	27%			\$21	\$22	\$21	0%	
			Tame Grass	0%			\$21	\$22	\$21	0%	
	Dry Land		72%			\$184	\$203	\$229	13%		
		Irrigated Land	2%	100	100.0%	\$385	\$443	\$522	18%	9.5%	
		Osborne	Native Grass	47%			\$12	\$13	\$14	8%	
			Tame Grass	0%			\$12	\$13	\$14	8%	
	Dry Land		51%			\$67	\$77	\$90	17%		
		Irrigated Land	2%	100	100.0%	\$386	\$445	\$528	19%	12.8%	
		Ottawa	Native Grass	44%			\$43	\$46	\$49	6%	
			Tame Grass	1%			\$60	\$74	\$88	19%	
	Dry Land		54%			\$215	\$229	\$244	7%		
		Irrigated Land	1%	100	74.1%	\$389	\$447	\$527	18%	6.7%	
		Phillips	Native Grass	47%			\$17	\$18	\$20	7%	
			Tame Grass	0%			\$17	\$18	\$20	7%	
	Dry Land		52%			\$114	\$129	\$156	21%		
		Irrigated Land	1%	100	100.0%	\$386	\$442	\$520	18%	14.3%	
Republic		Native Grass	24%			\$39	\$47	\$49	4%		
		Tame Grass	0%			\$43	\$51	\$59	15%		
	Dry Land	71%			\$216	\$243	\$274	13%			
	Irrigated Land	5%	100	83.0%	\$347	\$400	\$475	19%	11.0%		
	Rooks	Native Grass	46%			\$14	\$16	\$17	7%		
		Tame Grass	0%			\$14	\$16	\$17	7%		
Dry Land		53%			\$76	\$90	\$117	30%			
	Irrigated Land	0%	100	100.0%	\$394	\$456	\$548	20%	19.3%		
	Smith	Native Grass	40%			\$17	\$18	\$19	6%		
		Tame Grass	0%			\$17	\$18	\$19	6%		
Dry Land		58%			\$137	\$159	\$192	21%			
	Irrigated Land	2%	100	100.0%	\$375	\$430	\$504	17%	14.7%		
	Washington	Native Grass	42%			\$45	\$47	\$49	4%		
		Tame Grass	2%			\$72	\$84	\$96	14%		
Dry Land		55%			\$198	\$230	\$269	17%			
	Irrigated Land	1%	100	69.4%	\$360	\$415	\$492	19%	11.5%		

