What Kansas landowners should understand about production costs, cash rents, and the next lease conversation

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1 The rent check has held up while farm profits have fallen

If your family owns farmland but has not farmed it for a generation, you may know the property better than you know the business operating on it. You remember who bought the farm, which fields were most productive, and who has been renting it. The annual rent check is familiar. The economics behind that check may be less so.

That can make recent farm news difficult to interpret. Farmers describe tight margins. Fertilizer prices have retreated from their highs, and land remains valuable. Yet the rent on your farm may have barely changed.

Those observations can all be true. In my November 2026 Kansas Landowners Conference presentation, I explain how they fit together and what they mean for the next conversation with your tenant.

Most of the figures here concern non-irrigated cropland, often called dryland: ground that depends on rainfall rather than irrigation. Irrigated acres have a different cost structure and rent for more than twice as much, so they need a separate comparison.

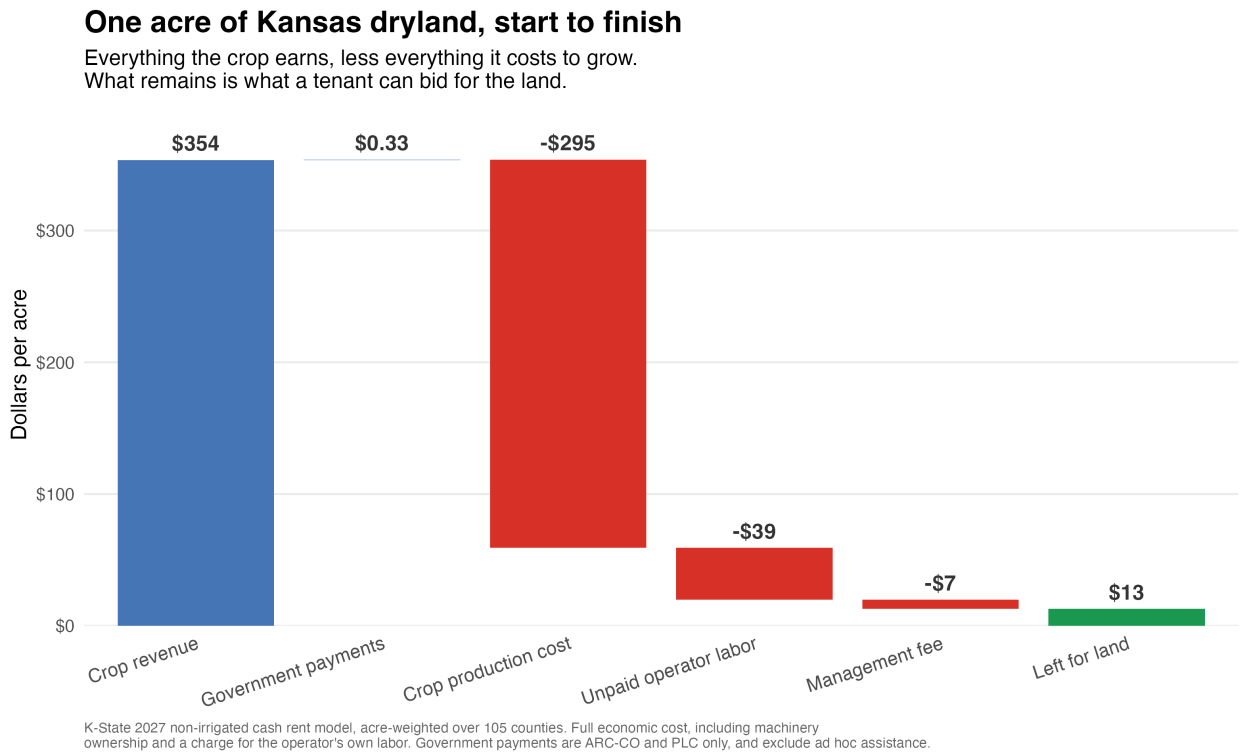


Figure 1: Waterfall chart of one acre of Kansas dryland, from $354 of crop revenue down to $13 left for land.

2 What an acre can earn for the landowner

An acre produces a crop, and selling that crop generates revenue. The operator has to cover the costs of producing it, including the use of equipment and the operator's own time. The amount remaining provides the economic room for rent.

Economists call this the **tenant's residual**. The word "residual" simply means what remains after the other costs have been accounted for. We use that calculation as the starting point for the county estimates in the K-State cash rent publication.

Figure 1 illustrates the calculation for the 2027 crop year, averaged across all 105 Kansas counties and weighted by each county's non-irrigated acres. The model projects about $354 per acre in crop revenue and 33 cents in the farm program payments it includes. Production costs take about $295, the operator's unpaid labor another $39, and management about $7. Using the underlying unrounded figures leaves approximately **$13 per acre for land**.

Figure 1. Under the model's 2027 price assumptions, an acre of Kansas dryland leaves about $13 for land after full economic costs.

The charges for labor and management recognize work that does not necessarily appear as a check written by the farm. The operator supplies both the time needed to farm the ground and the judgment needed to run the business. The calculation allows a return for that work before determining what remains for rent.

The price assumption matters just as much as the costs. The $13 already assumes a substantial recovery in crop prices, so it describes one forecast rather than a proposed rent for your farm.

3 Where the estimate comes from

We build the rent estimate from farm records, crop cost comparisons, and county production data. It is separate from the K-State crop budgets, which describe the expected costs and returns for producing a particular crop in a particular region.

For the rent model, we begin with Kansas Farm Management Association whole-farm summaries for non-irrigated crop farms. We average production costs over 2023, 2024, and 2025 by region. The cost measure used here excludes cash rent and unpaid operator labor, allowing us to calculate the return to land and add the labor charge separately. Using several years reduces the influence of an unusually poor or unusually good season.

We then use USDA Economic Research Service cost ratios to divide that Kansas cost level among corn, soybeans, wheat, and sorghum. The ERS reports cover the Prairie Gateway region, and the relative costs among crops have been fairly stable over thirty years. We use those proportions, while keeping the overall cost level tied to Kansas farm records.

Farm Service Agency acreage records provide each county's crop mix and fallow acreage, meaning land left out of crop production for a season. With that information, we turn six regional cost figures into 105 county estimates. Each county's yield history supplies the expected bushels, and a 2027 price forecast supplies their value.

The model also includes county calculations for Agriculture Risk Coverage and Price Loss Coverage, commonly abbreviated ARC-CO and PLC. These are standing farm bill programs. Additional assistance authorized outside those programs is excluded, a distinction that becomes important when we compare the model with rents actually paid.

The K-State crop budgets offer a useful comparison. The 2027 editions, released November 1, show $443.87 per acre in direct expenses for northeast Kansas corn, $55.02 in machinery

capital recovery, and $140.00 in cash rent, for $638.89 in total cost. The $140 rent matches the K-State estimate for the northeast district by construction, so agreement on that line is not independent confirmation that the crop can support it.

The budget assumes 145 bushels per acre and a corn price of $4.64. That price comes from a December futures contract adjusted for the seven-year average harvest basis at a local elevator. “Basis” is the difference between the local cash price and the futures price. The rent model uses $5.46 for Kansas corn, derived from ERS marketing-year price forecasts adjusted for the Kansas price difference.

The northeast budget price and the statewide model price cover different geographic areas. When we compare both sets of prices across the state using acreage weights, the model’s corn price is 64 cents higher than the budgets’ price. Soybean prices agree to within five cents, while the budgets are seventeen cents higher on wheat. Sorghum follows corn in both methods.

Using the budgets’ prices in the residual calculation, while holding yields, costs, acreage, and the payment line unchanged, reduces projected revenue from $354 to $337 per acre. The residual falls from $13 to about three dollars below zero. Lower prices could raise ARC-CO and PLC payments somewhat, but the estimated offset at these price levels is small.

4 How much depends on the crop price

Kansas corn averaged $4.00 in 2025, compared with the $5.46 assumed for 2027 in the rent model. At prices closer to those farmers received in 2025, the calculation leaves nothing for rent after full economic costs. The $13 therefore represents an outcome that depends on a substantial price recovery.

A relatively small price change can use up that remainder. In the model’s sensitivity calculation, a dollar change in corn price moves the residual by about $48 per acre. Fifty cents is worth about $24, nearly twice the projected $13. A precise-looking rent estimate can rest on a very uncertain crop price.

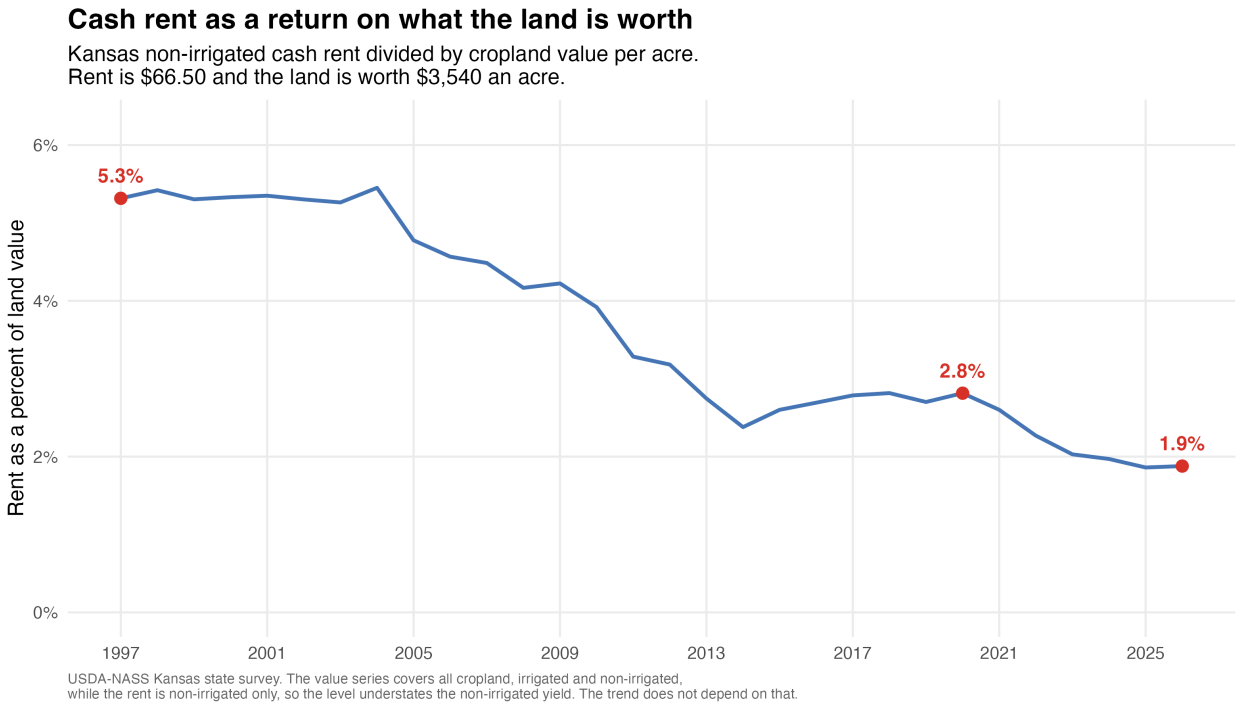


Figure 2: Line chart of Kansas cash rent as a percent of cropland value, 1997 through 2026, falling from 5.3 percent to 1.9 percent.

5 Rental income relative to land value

For an owner, the natural comparison may be the rent check against what the farm is worth. Kansas cropland is valued at about $3,540 per acre, while the state non-irrigated cash rent is $66.50. Dividing the rent by the value gives about 1.9 percent before property taxes and other expenses the owner pays.

Figure 2 follows that ratio over thirty years. It was 2.8 percent in 2020 and 5.3 percent in 1997, so current rental income represents a much smaller share of the reported land value.

Figure 2. Non-irrigated cash rent divided by all-cropland value fell from 5.3 percent in 1997 to 1.9 percent in 2026.

Land value rose 78 percent between 2020 and 2026, while rent rose 19 percent. Owners received larger rent checks, but buyers paid much more for the land. A higher sale value does not, by itself, give a tenant more income with which to pay rent.

The comparison has a limitation: the value series covers all cropland, including irrigated acres, while the rent series covers non-irrigated ground only. The resulting ratio understates

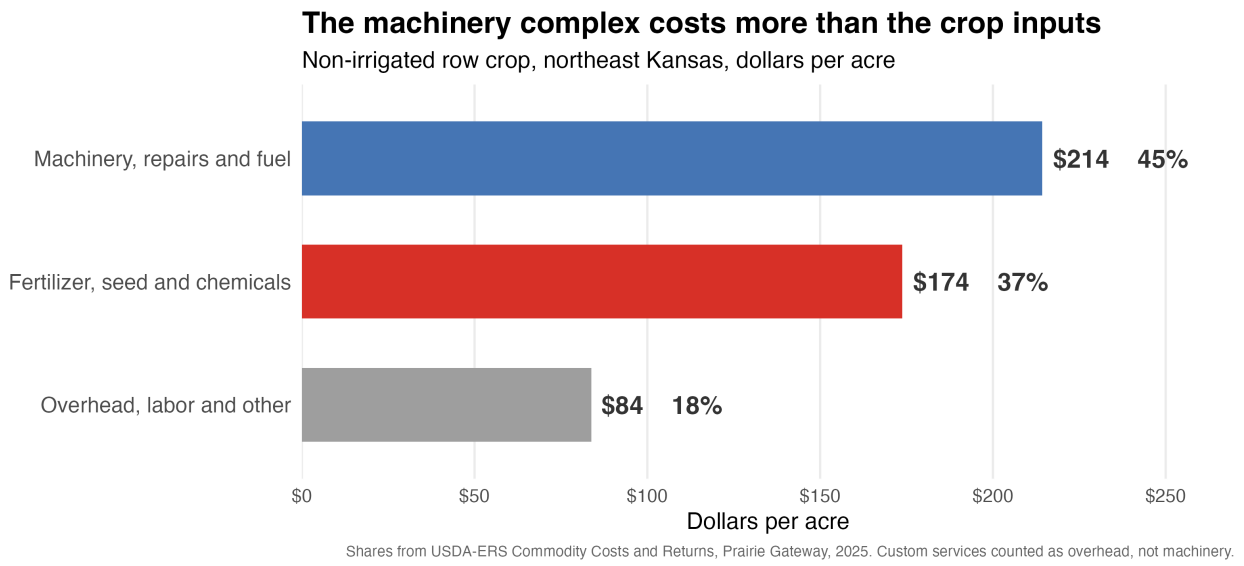


Figure 3: Bar chart comparing three cost groups per acre: machinery, repairs and fuel at $214; fertilizer, seed and chemicals at $174; overhead, labor and other at $84.

the non-irrigated rental yield and should be treated as a broad comparison. For your own property, compare the rent and value of the same acres and account for the expenses you pay.

6 The equipment cost behind the crop

Fertilizer is an understandable place to focus when thinking about farm costs. Its price changes attract attention, and a large fertilizer bill is easy to picture. Equipment deserves at least as much attention.

In the ERS illustration used in Figure 3, machinery, repairs, and fuel total about $214 per acre, or 45 percent of costs. Fertilizer, seed, and chemicals total $174, or 37 percent. Overhead, labor, and other expenses account for the remaining $84.

Figure 3. In this cost illustration, machinery, repairs, and fuel account for more than fertilizer, seed, and chemicals combined.

Custom services, such as hiring someone to perform a field operation, appear in overhead here. Counting that work with machinery would bring the machinery group to about 50 percent of total costs. The equipment still has to be paid for, whether the farmer owns it or hires someone who does.

Machinery capital recovery accounts for about 32 percent of the total. Capital recovery recognizes that a tractor or combine wears out, loses value, and ties up money that could earn a return elsewhere. Those costs exist even in a year when the operator buys no equipment. A paid-for combine still has an economic cost each time it harvests another acre.

Fertilizer accounts for about 14 percent of the total, and seed another 14 percent. Repairs and chemicals each account for about 9 percent. Those shares help explain why cheaper fertilizer alone may provide only limited relief.

The dollar amounts in this illustration total about $472 per acre and come from ERS cost reports for the Prairie Gateway region, which spans five states. We use the relative cost information to help allocate costs in Kansas, but the lower Kansas cost level in the rent model comes from Kansas farm records. The chart is useful for understanding the composition of costs, not as a cost estimate for every Kansas acre.

7 Costs since the peak

Total expense per crop acre in the Kansas farm records rose from $350 in 2021 to $419 in 2023, then declined to $402 in 2025. That puts expenses about 4 percent below the peak but still 15 percent above 2021. Figure 4 shows why the decline has been modest.

Figure 4. Fertilizer expense declined after 2023, while machinery remained expensive and interest continued to rise.

Fertilizer expense rose from $54 per acre in 2021 to $81 in 2023, then fell to $66 in 2025, about 18 percent below the peak. Machinery expense went from $107 to $137 and then to $133, a decline of only about 2 percent from its peak. Interest expense increased from $13 in 2021 to $21 in 2025, up about 61 percent using the unrounded figures.

Chemicals were the only category below their 2021 level in this comparison, while cash rent changed very little. These expenses are measured per crop acre across the farm. In particular, the cash-rent expense shown in the chart is not a rental quotation per leased acre.

A tenant can spend less on fertilizer than at the peak and still face a difficult overall cost structure. Looking at one input price will miss that.

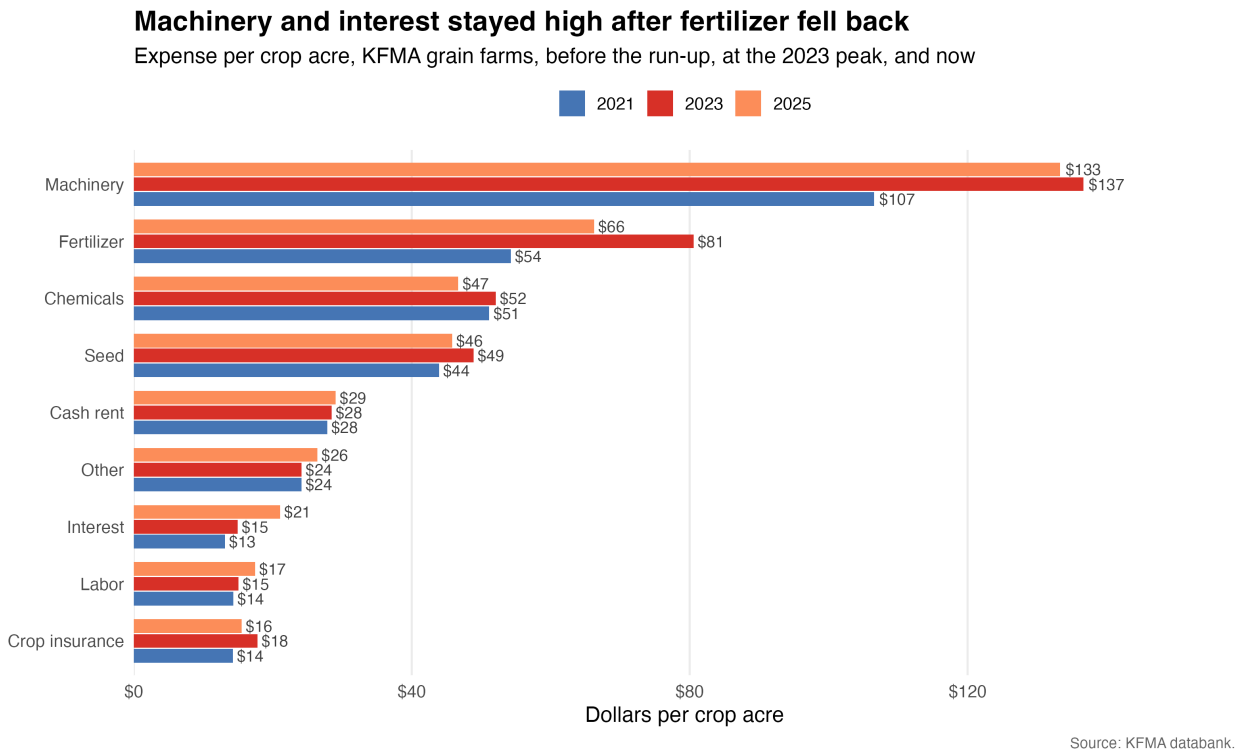


Figure 4: Bar chart of Kansas farm expenses per crop acre by category for 2021, 2023 and 2025.

8 Differences across Kansas

Kansas contains very different farming environments, so a statewide average has limited use for an individual property. The table compares projected revenue with full economic cost excluding land, alongside the 2026 survey rent for each crop reporting district.

The cost column includes production costs, unpaid operator labor, and management, the same deductions shown in Figure 1. The rent column is separate and has not already been deducted from revenue.

District	Revenue	Full economic cost excluding land	2026 rent	Rent as share of revenue
Northeast	$769	$554	$139	18%
East Central	$515	$520	$73	14%
North Central	$455	$404	$80	18%
Southeast	$443	$487	$64	14%
Central	$340	$331	$56	17%
South Central	$292	$319	$51	17%
Northwest	$275	$279	$59	22%
West Central	$243	$242	$49	20%
Southwest	$207	$217	$40	19%

Both revenue and costs tend to decline from east to west, but revenue falls faster. The northeast comparison shows $769 per acre in revenue and $554 in full economic cost excluding land. In the southwest, the corresponding figures are $207 and $217. Lower costs in western Kansas do not create room for an eastern Kansas rent when expected revenue is lower still.

In five of the nine districts, full economic costs excluding land exceed projected crop revenue: East Central, Southeast, South Central, Northwest, and Southwest. Across the state, survey rent amounts to about 18 percent of projected gross revenue. That share is a useful comparison, but it does not tell us whether an individual farm can cover its remaining costs.

9 What happened to farm income

Median net farm income per crop acre in the Kansas crop-farm analysis fell from $167 in 2021 to $34 in 2024, then recovered to $89 in 2025. The median describes the farm in the middle of the group. The recovery reflected record yields and government payments rather than a comparable recovery in crop prices, and western Kansas benefited less.

These figures are **after cash rent has been paid and include government payments**. They measure something different from the forward-looking residual discussed above. We should not treat the $89 of net farm income as another $89 available for rent.

The median also conceals substantial differences among farms. Nearly 30 percent of the grain farms in the KFMA records reported negative net farm income in 2024. Simply subtracting government payments from those accounts raises the share to about 50 percent. In 2025, the corresponding shares were about 13 percent and 35 percent.

That subtraction shows how much payments contributed to reported income. It does not predict how farms would have changed their decisions without those programs.

10 Why rents adjust slowly

During the decline in median income from $167 in 2021 to $34 in 2024, the USDA state cash-rent figure rose from $58 to $65 per acre. The state figure reached $66.50 in 2026. Comparing 2020 with 2026, survey rents increased in 98 of the 102 Kansas counties with published figures.

A rental survey measures payments under existing agreements. Some leases cover more than one year. Even an annual agreement commonly begins its next negotiation with last year's rent. As a result, the survey can respond slowly when the economics of the next crop change.

An operator may also accept a smaller return on personal labor or invested capital to retain acreage. If the equipment is already available, another field can help spread its cost over more acres. That can make a tenant willing to pay more than a calculation charging every acre its full share of economic costs would suggest. It does not guarantee that the arrangement can continue indefinitely.

A fixed cash lease makes the landowner's income more predictable. The amount due does not automatically fall with a poor crop or a lower grain price, leaving the tenant to absorb the direct effect on the year's operating margin. The landowner still faces risks, including nonpayment and deterioration in the property's condition, but the lease places much of the annual production and price variability on the operator.

Government assistance helps explain another part of the difference between the residual and observed rents. The model includes only ARC-CO and PLC, with projected payments of 33 cents per acre for 2027. The presentation reports Farmer Bridge Assistance for the 2025 crop of roughly $30 to $50 per acre. Adding assistance of that size to a $13 residual produces $43 to $63, much closer to the $62 county survey average.

That comparison crosses crop years: the residual is a 2027 forecast, while the assistance was paid on the 2025 crop. It demonstrates how income omitted from the model can help support rent, without establishing that similar assistance will arrive for the next crop. A lease conversation should make explicit whether either party is counting on another payment.

11 What the rental figures measure

The K-State publication contains three figures that deserve careful separation. Each answers a different question about the income available to land or the rent being paid.

About $13 per acre is the model's raw residual after full economic costs excluding land, under its assumed 2027 prices and limited set of government payments. It describes what remains under those assumptions.

About $62 per acre is the average of the 102 published USDA county rental figures used in the comparison. We weight those figures by acres, so counties with more acres contribute more to the result.

About $53.80 per acre is the published K-State estimate after anchoring the model to the rental survey. The method sets a floor at 80 percent of each county's survey value.

USDA's separately published state figure is $66.50. It differs from the $62 calculated across published county values because the two figures are different averages. Keep that distinction in mind when comparing a county-based estimate with a statewide report.

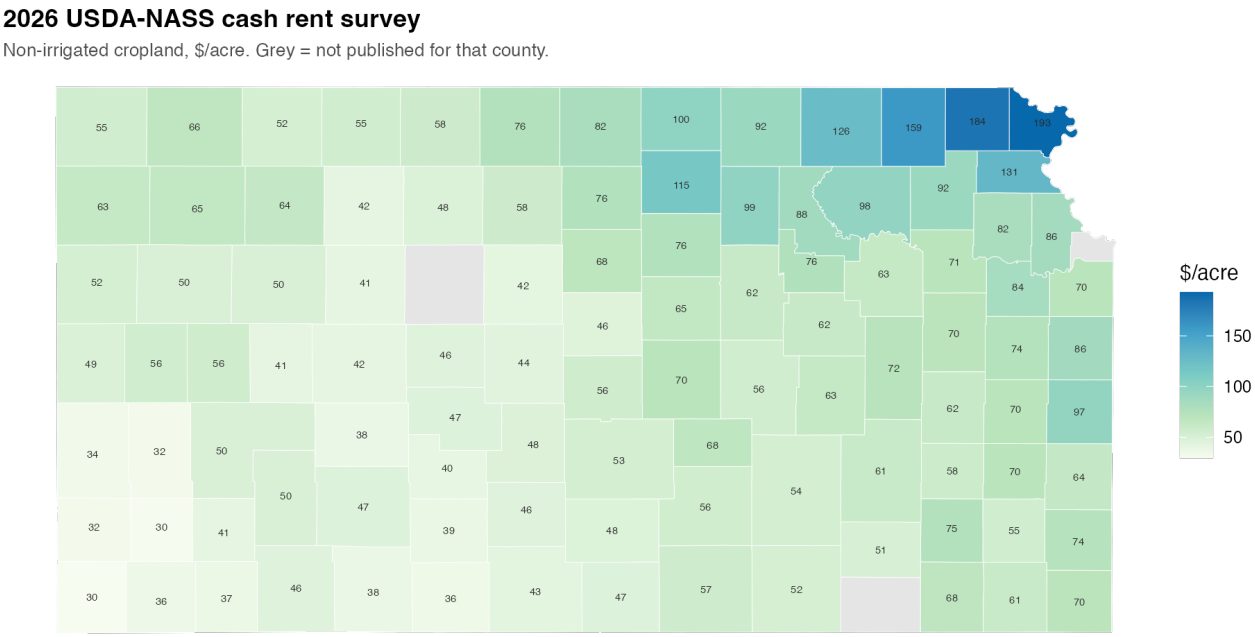


Figure 5: Map of 2026 USDA-NASS non-irrigated cropland cash rents by Kansas county, in dollars per acre.

In 68 of the 102 counties with published survey figures, the 80 percent floor determines the K-State estimate. Where that floor applies, the underlying profitability calculation is lower than the published number. A published estimate close to the going rent therefore does not necessarily mean the coming crop's projected earnings comfortably support it.

12 Your county's rental history

Rents do adjust downward, although the changes are uneven. Thirty-two counties reported lower rents in 2026 than in 2025, and 61 of the 102 counties were below their own peak for 2020 through 2026. Thirty-three set a new high, while eight matched an earlier peak. The county average weighted by acres still rose from $60 to $62.

Figure 5. The 2026 survey ranges from the low $30s in southwest Kansas to the $190s along the Missouri River, in dollars per acre.

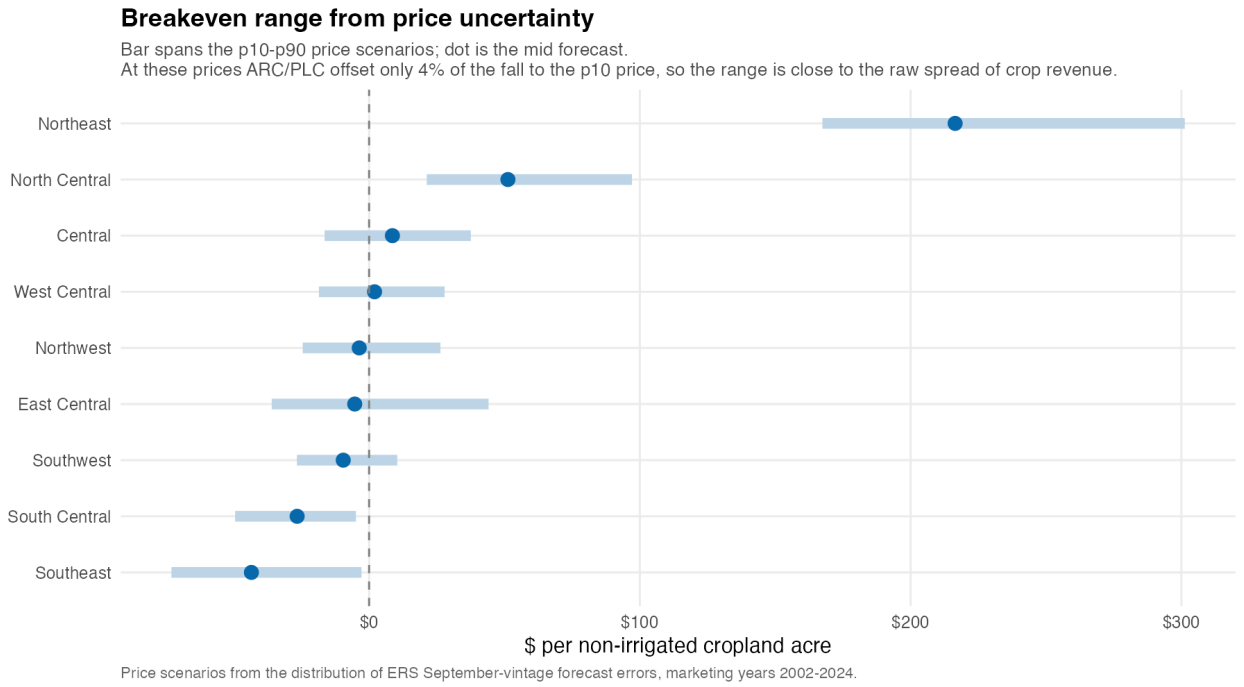


Figure 6: Dot and range chart of the raw breakeven by Kansas crop reporting district, with the price range bar wider than the gaps between districts.

The map provides a starting point for finding the going rent near your farm. In the publication, each county also has a small line chart, or sparkline, showing its rental history over seven years. Each chart uses that county's own scale, so it shows the direction of change more readily than the size of a difference between counties.

Even within a county, a field can differ substantially from the average. Its productive capacity and the costs of farming it matter. The county figure gives both parties a common reference, while the farm's own yield history helps determine how that reference applies.

13 The uncertainty around an estimate

Figure 6 shows the raw residual by district before the model is anchored to the survey. The dot represents the middle price forecast, and the bar shows a range based on past errors in the ERS price forecast. Wider bars indicate more room for the result to change with prices.

Figure 6. Price uncertainty produces a range of raw breakeven estimates wider than the differences between most districts.

The northeast has by far the largest positive residual, while North Central also remains above zero across the range shown. Several other districts have middle estimates near or below zero. These figures describe what remains after full economic costs under the model's assumptions, rather than what someone would pay to buy the land.

The county tables also provide a low and a high around each published estimate, using past price forecast errors to construct the range. Those endpoints are scenarios for the coming crop, not outcomes already observed on your farm. Considering the range is more useful than treating the middle estimate as certain.

14 Sharing risk through a flexible lease

A flexible lease allows rent to move with an agreed measure of the crop's performance. In Figure 7, the payment is approximately 16 percent of gross crop revenue, meaning revenue before expenses. The percentage was chosen retrospectively so that total payments over 2015 through 2025 match the fixed-rent comparison.

Figure 7. In this historical illustration, a flexible lease at approximately 16 percent of revenue matches total fixed rent over 2015–2025, with different payments each year.

The flexible arrangement would have paid about $26 more per acre in 2021 and $9 less in 2024. The owner receives more in a strong revenue year and less in a weak one, while the operator's rent obligation moves with the crop's ability to pay.

The matching totals are a feature of how this example was constructed. They are not a promise about future payments, and 16 percent is not a recommended share for every farm. The percentage was calibrated to rents actually charged, which exceed what the forward-looking residual supports. It therefore reproduces those historical rent levels rather than independently establishing an affordable payment. Statewide survey rent already amounts to about 18 percent of projected gross revenue.

A formula tied only to revenue still leaves the operator exposed to higher production costs. Both parties need to agree on how revenue will be measured, what information they will share, and whether the arrangement should also account for cost changes. For an owner and tenant with different expectations about future grain prices, a flexible payment can make an agreement easier to reach.

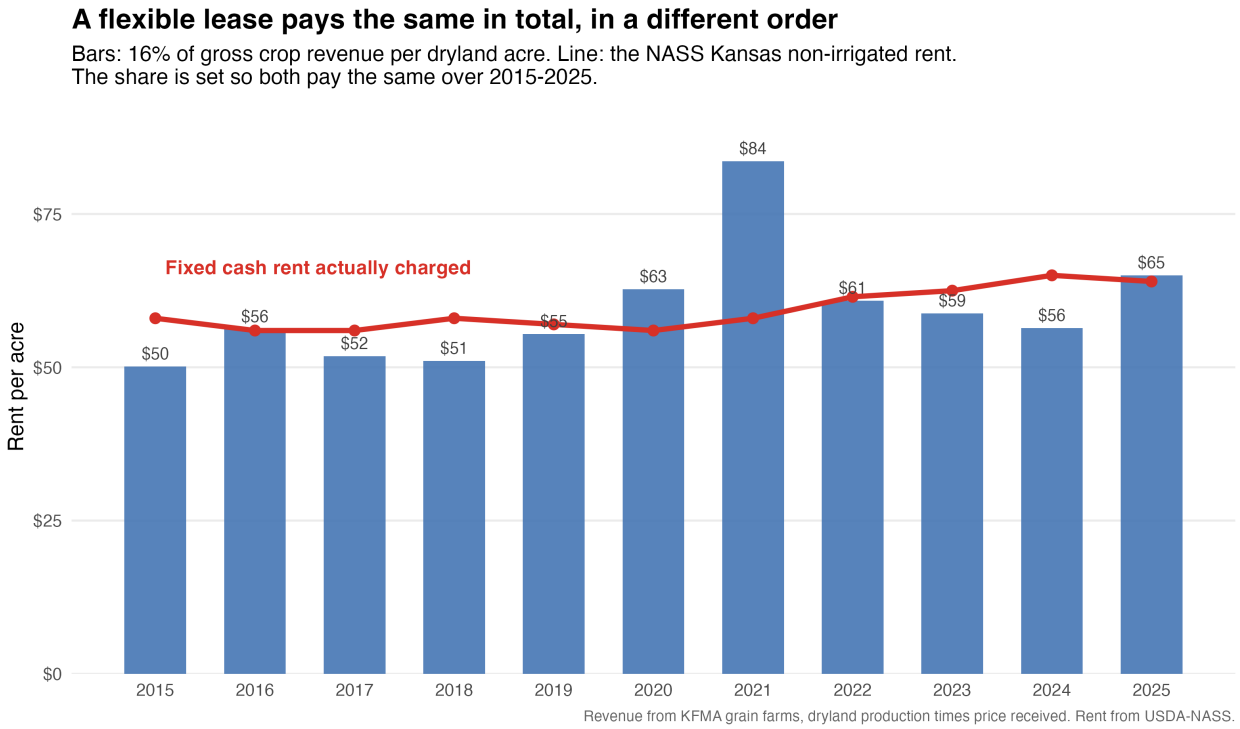


Figure 7: Bar and line chart comparing a flexible lease at 16 percent of gross crop revenue against Kansas fixed cash rents, 2015 through 2025.

15 A better conversation at renewal

You do not need to become a crop producer to be an informed landowner. You do need enough information to understand what your property can produce and what your lease asks of the person farming it. I would begin the next conversation with these questions:

- What crops have been grown on my fields, and what have they yielded over several years?
- What do recent soil tests tell us about fertility, and what needs attention?
- What prices and production costs are you using in the coming year's budget?
- How does our rent compare with similar ground locally, and what explains the difference?
- Does our written lease still reflect what we both expect, including how and when we will review it?
- Would a flexible rent arrangement suit our circumstances better?

A field visit can make that discussion more concrete. Ask the operator to show you where the farm performs well and where it presents problems. The information may explain more about the property's earning capacity than another statewide average.

As an agricultural economist, I want both parties to understand the assumptions behind the rent. A high land value, a strong crop several years ago, or a hoped-for government payment can each influence expectations. None substitutes for examining the coming year's economics and the farm's longer record.

For a family that expects to own the land for another generation, an annual review should address both the income the property can provide and the conditions needed to keep it productive. That is a conversation worth having before the next rent check is due.

Adapted from "Row Crop Production Costs and the Effect on Rental Rates," prepared for the 2026 Kansas Landowners Conference. The county estimates come from "2027 Kansas County-Level Cash Rental Rates, Non-Irrigated Cropland," by Gregg Ibendahl and Daniel O'Brien, Kansas State University Department of Agricultural Economics, October 2026. Other data come from the Kansas Farm Management Association, the USDA National Agricultural Statistics Service, the USDA Economic Research Service, and the K-State crop budgets dated November 1, 2026.

16 Contact

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