

Economics of Agricultural Leases and ethical land renting

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Capital Assets

- Useful life beyond one production period
- Acquiring services of capital assets
 - Ownership
 - Renting or leasing
- Use of land (farmer's perspective):
 - Own and operate
 - Rent and operate
- "Operate" might be hiring custom machinery/production services
- Use of land (non-farmer's perspective)
 - Rent out
 - Own and operate via hiring custom services

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Basic Lease Types

- Crop-share
 - Landowner shares in annual revenues and typically in certain annual costs
- Cash rent
 - Landowner gets a fixed annual cash amount for use of land
- Numerous variants around these two

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Economics

- People act to maximize happiness (wealth?)
- Descriptive
 - provides theories that describe behavior
- Prescriptive
 - Prescribes how things "ought to be" given assumptions (e.g., "if you wish to maximize profit here's how you should behave")
- Nearly always about the "long" term
 - Excellent first cut at analysis
 - In short term are always moving towards long term in future

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Three broad principles relevant here

1) Competitive markets

- Adequate number of buyers and sellers
- Market players with similar preferences
- Perfect information (all are price takers)
- A state where “pie” is largest

When there are competitive markets . . .

2) Cost = revenue (cost/unit = price)

- Implies 0 economic profit

3) Equitable lease

- Technique for establishing leases (more later)

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Economic vs. accounting profit

• Economic profit

- Assets charged an opportunity interest cost (also accounts for risk)
- Charged a market, not accounting depreciation

• Accounting or financial profit

- Return on investment (\$ or %)

• Invest \$100,000 in a tractor

- Rent out for \$10,000 annually
- Cash expense and depreciation = \$4,000
- Accounting profit = \$6,000, ROI = 6%
- If bank interest rate is 7%, econ profit is -\$1,000

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1. Competitive markets

1. Cash value of a share lease = cash rent

- after adjust for possible risk premiums

2. Local rental rates similar across tenants

- Assuming similar land quality

3. Ownership profits = rental profits

- Doesn't matter whether own or rent

Think of these things as “in the long run” or “always moving towards”

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2. Cost = revenue = price

Increase output until $MC = MR$

- Competitive: $(MC = P)$, $(MC = AC)$
- Typical price close to typical cost

1. Tractor rental rates similar to tractor ownership costs

2. Custom rates close to ownership and operating costs of machinery

3. Elevator storage costs similar to on-farm

4. Alternative financing doesn't matter much

- “Too good to be true” deals likely not true

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3. Equitable lease

- Parties agree to maximize farm profit
 - Maximizing landlord or tenant profit individually not necessarily the same thing as maximizing farm profit
 - doesn't say how costs should be shared
- Equitable lease principle:
 - Expected revenues will be shared in the same proportion as costs
 - Based on convention and intuition
- If “investment” is the annual costs, then ROI is the same for landlord and tenant
 - Accounts for risk so would expect same ROI's

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In recent years, the majority of leasing questions received pertain to:

- Impact of adopting new technologies
- Cash renting
- “Non-traditional” leases
 - Net share rent
 - Flexible cash rent
 - Bushel rent
 - Combination cash/cropshare

... while current “hot topic” is slightly different, method of addressing questions has not changed.

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Determining the terms of a crop lease ...

- How are cash lease rates or the terms of crop share leases established?
 - Short answer is “the market”
- While landowners and tenants (i.e., the market) ultimately determine terms of crop share and cash leases, we use the equitable concept to arrive at a starting point for negotiations – and to better understand the market.

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Equitable vs. traditional share rent ...

Equitable: Income is shared in the same proportion as the contribution of total inputs.

Traditional: Income and shared expenses (if any) are shared in the same proportion as what has been done in the past. Share rent based on tradition may, or may not, be equitable.

Traditional = Equitable in the long-run

KSU-Lease.xls

- A what-if spreadsheet to analyze rents
- Delineates relative contributions
- Allows considering cash vs. crop-share
 - Can deal with a risk premium
- Very flexible; can handle
 - Net share leases
 - Fixed bushel rents
 - Cash transfers
- Important purpose is to allow people to move beyond traditional leases when they need to change (and to analyze impact of cash rent)

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A good crop share lease should follow five basic principles ...

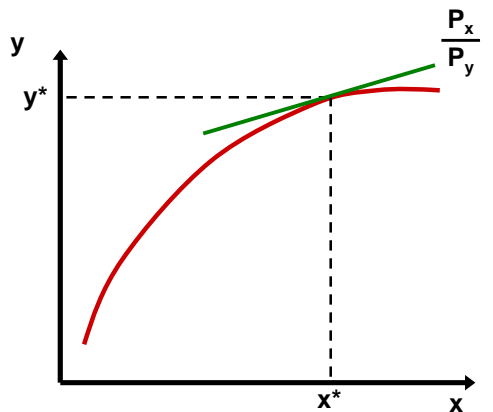
1. Yield increasing inputs should be shared
 2. Share arrangements should be adjusted as technology changes
 3. Total returns divided in same proportion as resources contributed
-
4. Compensation for unused long-term investments at termination
 5. Good landlord/tenant communications

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Principle #1: Yield increasing inputs should be shared

Examples of yield increasing inputs

- Fertilizer
- Irrigation water
- Herbicides ???
- Seed ???

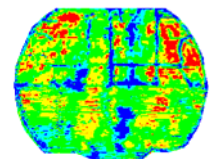


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Principle #2: Technology may affect share arrangements

Examples of technological change

- Reduced-/no-till
- New crops and/or rotations
- Center pivot irrigation
- Hybrid seed
- Bio-technology
- Precision agriculture (GPS)



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Impact of new technologies ...

- Why do people adopt new technologies?
- What happens as “new” technologies become common practice?
- How does this impact relative contributions?

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Impact of increasing cropping intensity to increase returns ...

- ... “profit” associated with new technology is bid out of the market over time.
- ... as profit is bid out of the market (typically through higher land costs), relative contributions change.
- ... equitable lease is “dynamic” as market adjusts to new technologies.

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Adoption of new technologies ...

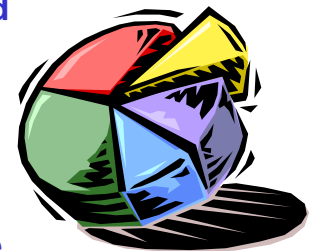
- ... tends to cause problems because traditional arrangements or rules-of-thumb often are no longer appropriate.
- ... should not be a problem if we follow basic principles of a good lease.
- ... if problems persist as to what is equitable, can lead to alternative leasing arrangements (e.g., cash lease).

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Principle #3: Returns divided in same proportion as resources contributed.

This requires annual contributions of both parties to be identified (budgeting type approach).

Valuing inputs can depend on whether the lease being developed is a one-year lease versus multiple-year lease.

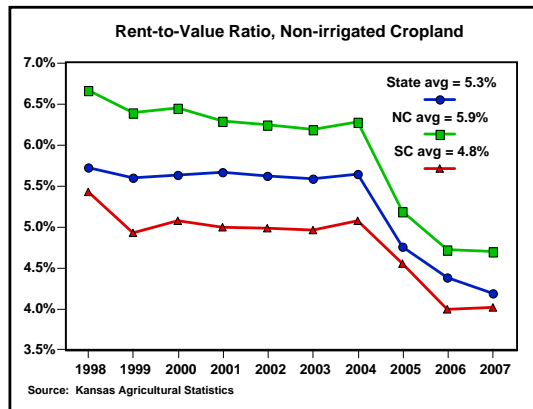


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Land contribution ...

The land contribution has typically been based on an “average market value” for the land along with an historical average return to land.

As cash leases become more common, the land contribution can be set equal to the cash rent.



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Machinery contributions ...

Machinery contribution should be based on average costs. Two methods for estimating the machinery contribution:

1. Machinery investment approach - annual contribution is based on depreciation, interest, repairs, fuel and oil, and labor.
2. Custom rates approach - annual contribution is based on reported custom rates and the typical operations.



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Crop production input contributions ...

The value of contributions for input expenses such as seed, herbicides, insecticides, fertilizer, etc. are generally valued at current market prices and represent “typical” production practices.

How do we deal with input prices if they currently deviate significantly from historical averages (e.g., fertilizer, fuel)?

We'll come back to this again

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Principle #4: Compensation for unused long-term investments at lease termination.

It is generally recommended that landowners make long-term investments such as terraces, irrigation well, lime, alfalfa establishment, etc.

If the tenant pays for long-term investments, or shares their cost, he should be compensated for his share of any value that remains when the lease is terminated

Lime, soil fertility (P), alfalfa stands, even no-till soil building (organic matter)

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Principle #5:

Good communications between the landlord and the tenant.

Because so many of the terms of a lease are based on negotiation between the landowner and the tenant, good communications are critical.

A lease is a legal contract in Kansas, thus it is suggested that terms of the lease agreed upon by both parties be put in writing. This becomes more important as the complexity of leases increases – or as the volatility of crop and input prices increases.

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Tests of a good crop share lease ...

- Are yield increasing inputs shared?
- Does it have flexibility to deal with change?
- Does it promote optimal management?
- Is income shared in same % as contributions?
- Is it written?
- Will it be reviewed periodically?
 - Keep the automatic rollover clauses out!
- Do all parties agree that lease is “fair”?

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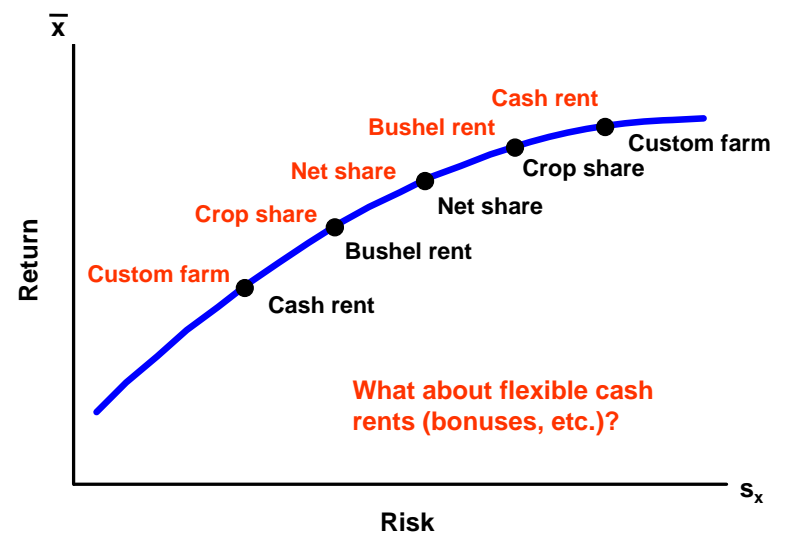
“Non-traditional” leases ...

- Cash rent
- Net share rent
- Bushel rent
- Flexible cash rent
- Combination cash and crop share rent

Because there is currently much interest in these types of leases, there must be good reasons to use them ...

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Landowner/producer risk-return tradeoff



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“Non-traditional” leases ...

Numerous good reasons to use these different types of leases, but landowners and producers need to recognize several things when doing so ...

- Communication is critical
- Rules-of-thumb really don't exist
- More important to have a written lease

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Risk

- Risk: variation about expected outcome
 - Suggests that the cash-equivalent of a share lease will be greater than cash rent
- Hasn't helped much in understanding rents
 - Tenant's risk lower recently (1990s thru 2006)
 - Cash rent is not riskless
 - Costs may be higher with share rents
 - So cash rents may be higher than share rents i.e., tenants bid up cash rents to avoid costs
- Crop share rent shares are sticky
 - Only way to bid up rents is through cash rent

Just when we got used to ignoring risk, it seems to come back into play . . .

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Impact of high costs and prices on leases ...

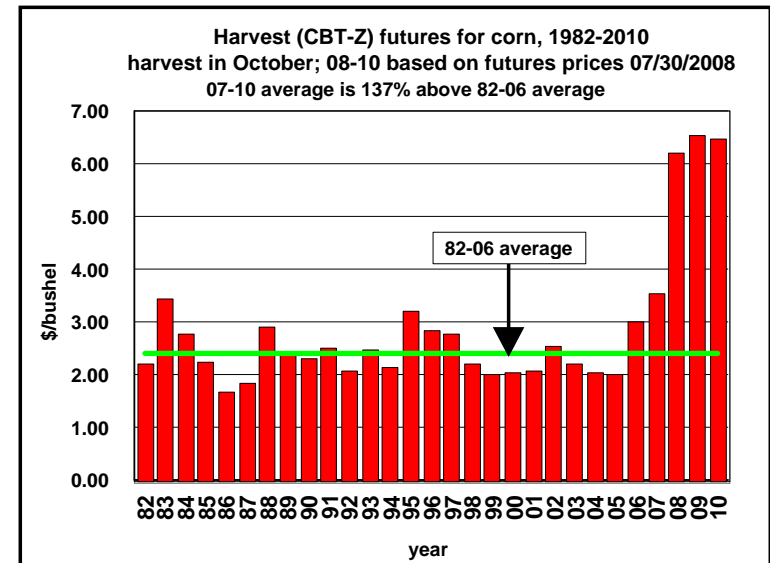
KSU-Lease.xls is a tool that can be used to analyze the impact current costs and prices have on equitable crop share leases as well as their cash-rent equivalents

How leases are impacted by current conditions depends on how producers change (or not change) production practices in response to these high prices and costs

➔ producers should “run their own numbers”

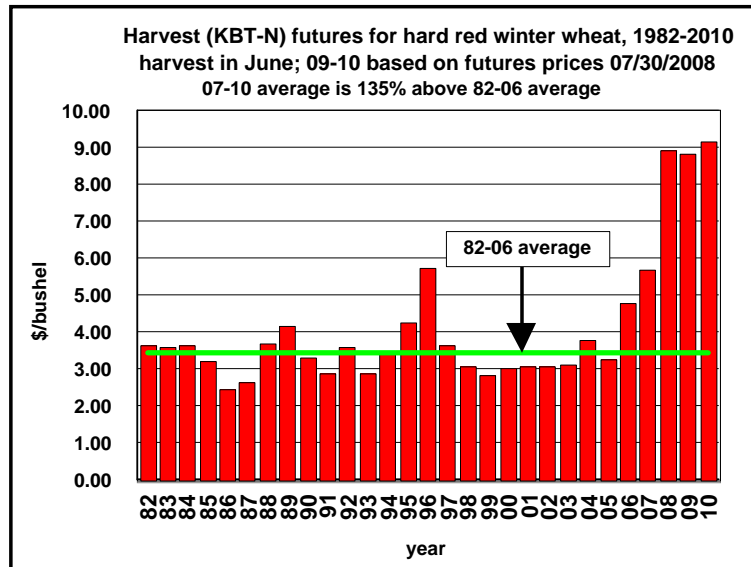
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In late 06/early 07 the crop price world changed!



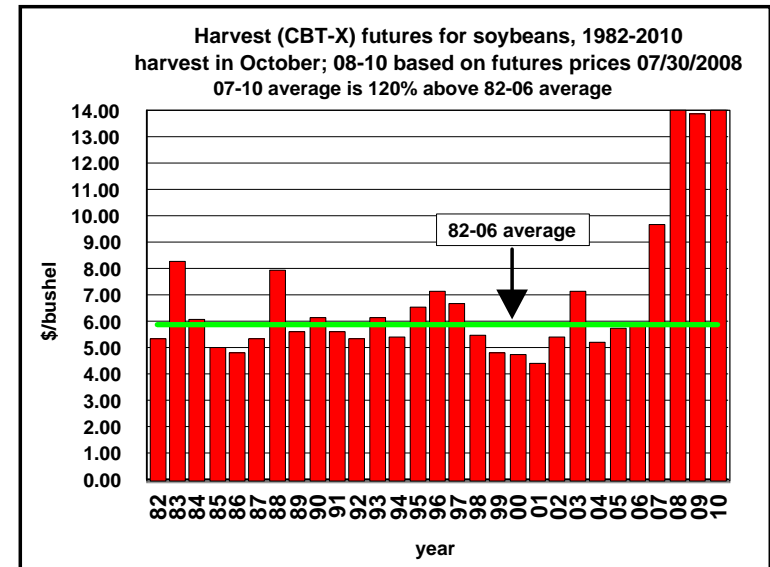
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It's not just corn!



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It's not just corn!



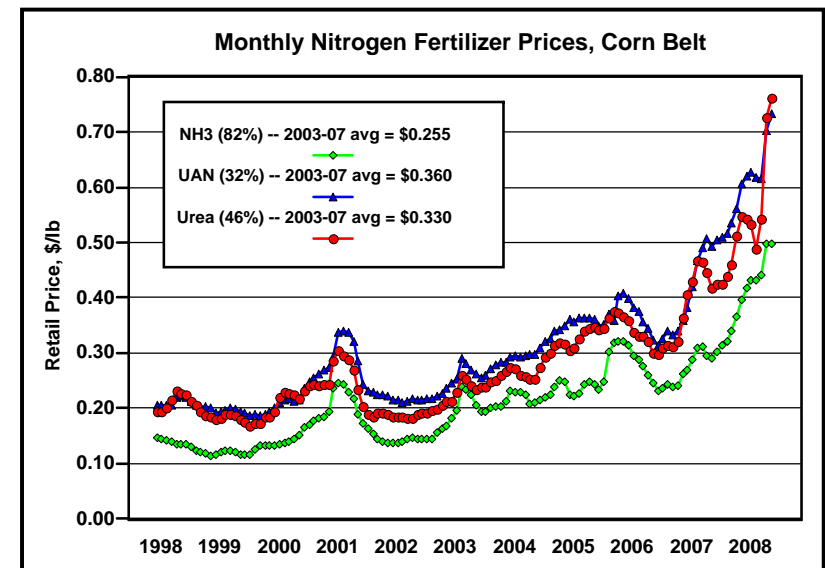
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The "new world"

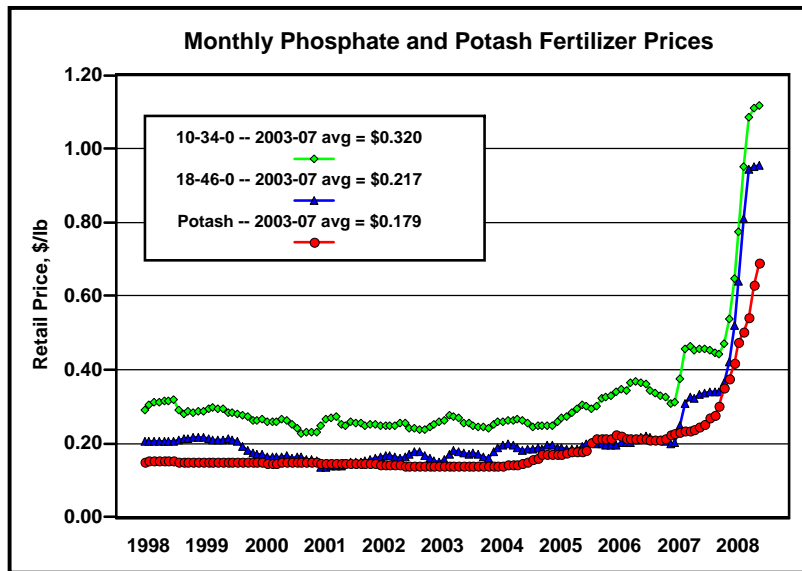
- Landlords detected massive profits
 - Using 3-year expectations, tenants "could" pay as much as 2x-3x of going market rental rates
- Land prices rise
- Cash rents not keeping up
 - Risk? Poor information? Taking advantage?
 - Some landowners wish to go back to crop-share
- Some tenants jumping cash rents
- Some tenants paying bonus rents
 - What are the FSA issues
 - Will bonuses be expected in future?

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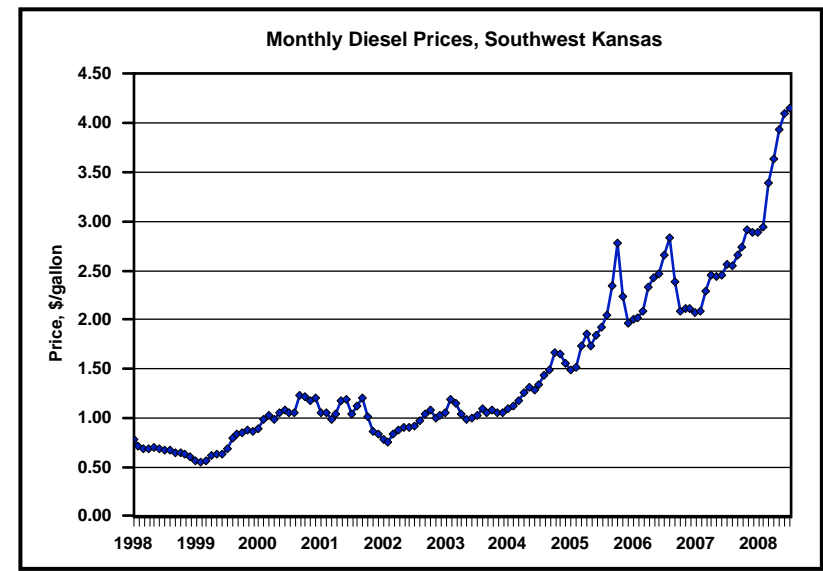
Input prices jumped up a little later than crop prices



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The “newer” new world

- Fertilizer, herbicide, machinery costs, and fuel, all have taken massive jumps in the last 12 months
 - Availability sometimes bigger worry than price
- Tenant’s risk has greatly increased
 - Less of a problem in crop share leases
- Expected crop prices still swamp input prices but a very large risk premium remains between crop-share and cash rent terms
 - Makes it difficult to determine whether the terms we observe are appropriate or inappropriate

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Rental Ethics . . . Our Perceptions

- Tenants have the information (power)
- Cash rents tend to rise over time
- Manna-from-heaven payments often should be shared
- Foot-in-door high rents often inappropriate
- Landowners need money just like tenants
- Landowners are sometimes unethical too
- Family situations often are the worst
- Ethical behavior more profitable in long run

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Tenants have the power!

- Landowners often:
 - Are generations removed
 - Are technologically removed
 - Are geographically removed
 - Are old and easily taken advantage of
 - View the arrangement with a tenant as a long-term commitment handed down from their parents
 - Think that farming is a low-income business and so want to “do their part” in aiding it
 - Believe there are few potential tenants and so are beholden to the existing tenant
- Tenants take advantage of the situation
 - Unintentionally (may be poor managers)
 - Intentionally (“she never asked me to raise rent”)
- Only occasionally do we see a landowner shafting a tenant

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Cash rents rise over time

- Although cash rents do fall about 30% of the years, on average they rise 2-3% annually
 - Unusual to see a 3-year contract rate that shouldn't be higher than the previous contract
- Landowners & tenants who see stable crop-share terms for years think that translates to stable cash rent
 - We see cash rental rates that haven't changed for years and decades
 - Landlord: “We didn't know.”
 - Tenant: “She never asked for a higher rent.”

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Manna-from-heaven payments

- Unexpected payments, typically from the government, should be shared according to parties' costs
 - Examples: CRP, CSP, EQIP
- If tenant does nothing to earn payment it should go to the land, i.e., the landowner
- Such payments should be discussed between landowner & tenant (especially the relative associated costs)

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Foot-in-door high rental payments

- High rent payments on new contracts often are followed by stagnant rates for many years, which could be:
 - A) Tenant overbids to get land, then realizes he's not profitable so rationalizes stagnant rents
 - B) Tenant uses this as a strategy to acquire land and pay lower-than-market rents over time
 - This is the least ethical outcome of the two
- Some tenants who do this actually beg for lower rents in near future, realizing that landlords are reluctant to change tenants
 - This is really unethical!

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Landowners need money too

- Tenants often make the argument that “she doesn’t need the money”
 - This is completely irrelevant!
- Admittedly, landowners sometimes foster this perception
 - ... which tends to change when investment-minded heirs acquire land being rented

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Landowner ethics

- Landowners may use their land for non-ag purposes and yet expect the same rent
 - Utility poles, oil leases
 - Lease hunting
- Landowners think if they paid too much for land it should bring a higher rent
 - This is completely irrelevant!
- Landowners might demand certain farming practices yet expect market rent
 - e.g., no fertilizer; conventional tillage
- Landowners make demands on current tenants to “fix” problems of past tenants

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Family situations often are the worst

- “Sweat-equity” parent-child relationships lead to unrealistic expectations across generations
- Family members have trouble believing their own parents, children, or siblings would cheat them
 - Backlash then goes overboard
- Family members often are “always around” and so the pain always resurfaces
 - Hard to “forget and move on”

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Ethics is good long run economics

- Poor ethics results in high tenant turnover:
 - Increases cost of relationship establishment and monitoring
 - Reduces profit to the land (tenant makes short run decisions)
- Bad business leads to unethical behavior
 - Poor management causes “I deserve more”
 - Bad behavior is rationalized
- Good ethics should emerge because it is the “right thing to do,” not for the purpose of long-run profit-maximization

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Miscellaneous

- **Landowners rarely will evict tenants!**
 - Often will sell land rather than evict tenants
 - Will put up with atrocious behavior of tenants (especially relatives)
- **Attorneys have some blame**
 - Promote perceptions of “poor returns to farming,” “sweat equity,” etc.
 - Believe, like many, that farming is “special”
- **Attorneys should**
 - Tell landowners it’s okay to evict tenants
 - Help clients understand that **FARMING IS A BUSINESS!**

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Questions ???



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