Subsidy Harvesting in Livestock Risk Protection

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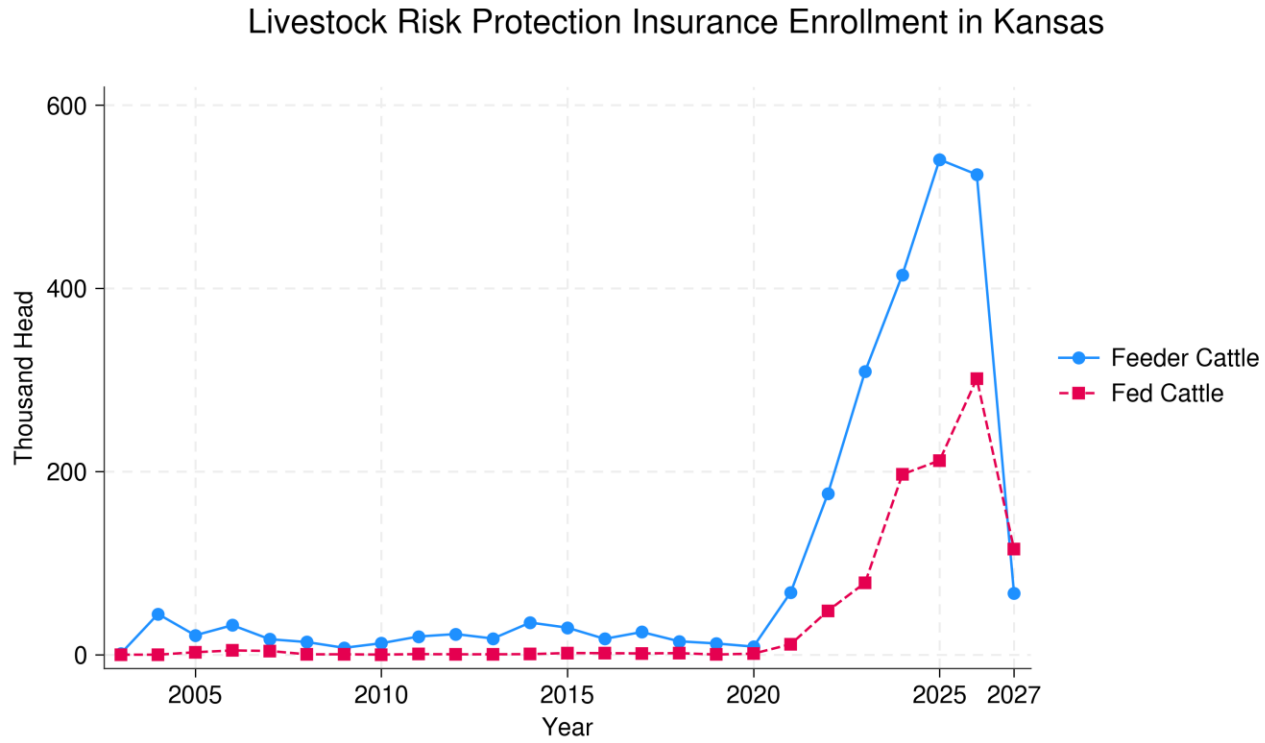
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LRP market share of feeder cattle approaching 50% in Kansas



Source: USDA Risk Management Agency. 2027 enrollment is still in progress.

Updated Oct 14 2026; 2024 calf crop – 1.3 million, 2025 1.23 M; Jan. 1 2025 calf inventory – 600,000, 2026 – 590 K
https://agmanager.info/crop-insurance/crop-insurance-papers-and-information/use-feeder-cattle-livestock-risk-protection

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Questions

- What is subsidy harvesting?
- RMA response
- What does existing research find?

What is subsidy harvesting?

- LRP is like *buying* a put option
  - You purchase coverage that pays out if prices fall
- When purchasing LRP, a producer could *sell* a closely matched exchange-traded put
  - A margin account must be maintained
    - Expensive in a down market, especially with high interest rates
    - Might not be eligible for a lender-secured hedging account
- The producer keeps the difference between the put premium received and the producer-paid LRP premium
  - No downside risk protection

Feeder cattle example

- Steers weight 2 LRP contract effective on 10/22/26, end date is 10/21/27
- Expected price is $331.99/cwt, producer premium of $18.33
- On 10/23, you could sell a put at $332/cwt for about $24.33
- $24.33-$18.33 = $6/cwt
  - Less trading, financing and “matching costs”

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Feeder cattle example, continued

- Up market is the simplest application
  - No LRP payout, put expires worthless, producer keeps $6 and gets the highest price
- Down market presents additional risk
  - LRP pays, but the short put loses approximately the same amount. The LRP price floor is effectively eliminated.
  - Falling prices generate margin calls before LRP payout arrives

Other types of subsidy harvesting

- "Clean" subsidy harvest (not presumed to be subsidy capture under current rules): sell a comparable call
  - Down market: Call expires worthless; keep premium; LRP pays out
  - Up market: Loss on short call offset by higher cattle price
  - No upside, but approximately "fixed price plus net subsidy" less transaction and other costs

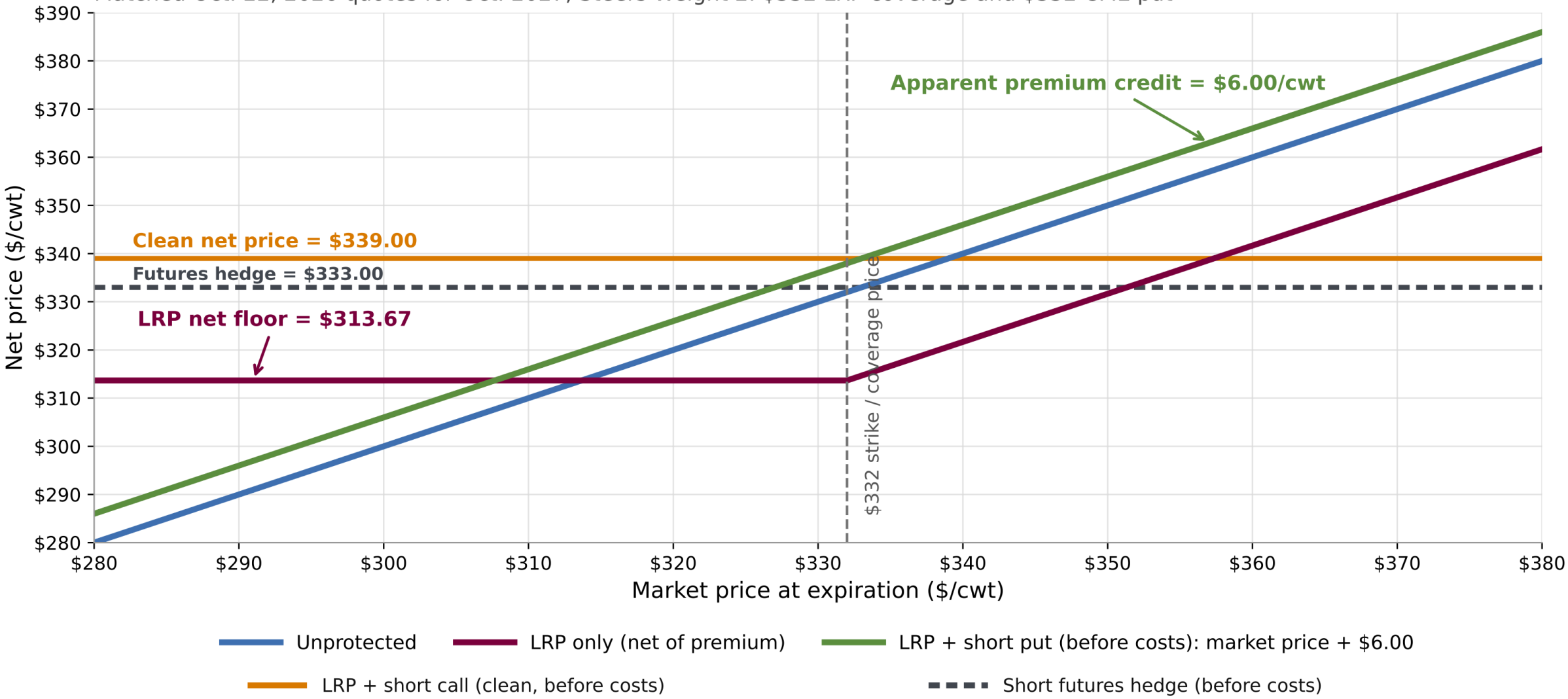
- A producer could also sell a comparable call and buy long futures, which replicates a short put
  - Down market: call expires worthless, loss on long futures offset by LRP payout
  - Up market: Loss on short call offset by gain on long futures, producer retains higher cattle price
  - Approximately the producer's original cattle-price exposure plus the net subsidy

Other subsidy harvesting details

- More complex combinations of futures, calls, or private contracts can produce economically similar results.
- Ending dates or contract sizes may be difficult to perfectly match
- For more detail: https://www.cihedging.com/posts/articles/white-paper-on-subsidy-harvesting/

Feeder Cattle Subsidy Harvesting Example

Matched Oct. 22, 2026 quotes for Oct. 2027, Steers Weight 2: $332 LRP coverage and $332 CME put



Original LRP/put assumptions: producer-paid LRP premium $18.33/cwt; put premium received $24.325/cwt.
Illustrative futures entry $333/cwt; $332 call premium inferred as $25.325/cwt using put–call parity, with zero financing cost.
Assumes owned cattle, perfect matching and holding to expiration. The call premium is inferred, not an observed quote.
Excludes brokerage, bid-ask slippage, margin financing, timing, and LRP–CME settlement/basis differences.

Timeline

- Mentioned online/in ag media late 2023 / early 2024
- Feb 2024: FCIC responds
- 2026 and 2027 policies now have significant restrictions for LRP contract holders

https://www.rma.usda.gov/sites/default/files/2024-04/022224SenseoftheBoard.pdf
https://www.dtnpf.com/agriculture/web/ag/news/article/2024/02/01/lrp-affecting-cattle-market

Current RMA rules

- Prohibits offsetting LRP coverage for the purpose of capturing the subsidy.
  - Presumes certain closely matched and timed options transactions are subsidy capture.
- Requires both producers and agents to certify against subsidy capture.
- May request brokerage and private-contract records during a USDA review.
- Can deny indemnities and impose administrative, civil, or criminal sanctions.
- Still allows legitimate hedging that is not primarily intended to capture the subsidy.
- Any enforcement actions?

https://www.rma.usda.gov/about-crop-insurance/frequently-asked-questions/livestock-risk-protection

What's allowed/generally permissible

- Sell a call to give up some upside and reduce the net cost of protection.
- Add or adjust a hedge later because prices or the producer's risk exposure changed.
- Sell a put that does not closely offset the LRP position.
- Use futures or options for bona fide hedging rather than to monetize the subsidy.

What's *not* allowed

- Buy LRP and sell a matched CME put near the same time.
  - Example: LRP costs $18/cwt; producer sells a put for $24/cwt.
- Applies if all the following conditions are present:
  - Option expires within 4 calendar days of the LRP end date;
  - Trade occurs 2 trading days before through 5 days after LRP purchase; and
  - Option premium exceeds 80% of producer-paid LRP premium.
- Similar rules apply to a synthetic short put, certain purchased calls, and equivalent private contracts.

Evidence for subsidy harvesting?

- Substantial response by researchers!
- Subsidy Capture in Livestock Risk Protection Insurance: Assessing Prevalence and Program Exposure (Feuz, 2025) https://onlinelibrary.wiley.com/doi/full/10.1002/aepp.70046
- A Theory of Subsidy Harvesting in Livestock Price Insurance (Adjemian & Ramsey, 2026) https://www.nber.org/papers/w34887 https://www.nber.org/system/files/chapters/c15386/revisions/c15386.rev0.pdf
- Timing, Trading Frictions, and the Limits of Subsidy Capture in Livestock Risk Protection (Zhang, Keller, Arita, & Steinbach, 2026) https://www.nber.org/papers/w35819
- Subsidy expansions, pricing wedges, and derivative markets: Evidence from livestock risk protection (Park, Fang, Connor, & Mitchell, 2026) https://onlinelibrary.wiley.com/doi/abs/10.1111/jori.70068

Evidence from LRP Purchase Patterns

- Feuz (2025) analyzed whether LRP purchases cluster on end dates aligned with CME option expirations
- Clustering increased substantially after premium subsidies increased
- Strongest patterns:
  - **Feeder cattle:** > 2 times more insured head on aligned dates
  - **Swine:** > 5 times more insured head on aligned dates
  - **Fed cattle:** no significant pattern
- Patterns are consistent with some subsidy harvesting, but CME positions are not observed
  - Alternative explanation: better indemnity outcomes for swine aligned with purchase dates
  - Clustering may also reflect better pricing, common marketing dates, complementary hedging, or reduced timing mismatch
- Estimated 2024 **maximum** exposure
  - $10 million for feeder cattle (7% of subsidies)
  - $29 million for swine (19% of subsidies)

Theory and Preliminary Market Evidence

- Adjemian and Ramsey, working paper
- Two strategies:
  - **"Dirty" harvest:** buy LRP and sell a comparable put, retaining the premium difference but eliminating downside protection.
  - **"Clean" harvest:** combine LRP with options/futures to lock in a return, subject to trading and financing costs.
  - Theory shows subsidy harvesting is possible, but profitability depends on close contract matching, market liquidity, transaction costs, margin, and basis.
- Preliminary empirical analysis finds **weak evidence** that harvesting occurred
  - Matches weekly LRP transactions and CFTC Commitments of Traders data for livestock options, by species, for 2015–2024.
  - Potential profits existed, but were not easy to realize
  - Evidence and profitability differ by commodity
  - Options-market activity provides some supporting evidence, but results are not yet publicly available.
- Bottom line: The incentive exists theoretically; evidence of widespread implementation is limited

Can the Pricing Wedge Actually be Harvested?

- Zhang, Keller, Arita, & Steinbach, working paper
- Replicate Feuz 2025 finding
  - Clustering persists after 2025 rule change, across different volatility environments
- Simulate realistic LRP + short put strategies, with a real and observable premium wedge
  - Includes trading, margin, and financing costs
- Average returns are negative for all commodities
  - In favorable low-volatility periods, average gains are <$1/cwt
  - Worst 5% of outcomes > $28/cwt below LRP alone

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Evidence from Matched LRP and CME Prices

- Park, Fang, Connor, & Mitchell, 2026
- Matched 2005-2024 LRP endorsements to approximately comparable same-day CME puts
  - Compared the put premium with producer-paid LRP premium
- Average *price wedge* is negative before July 2020 and positive after
- The relatively small positive post-2020 price wedge suggests that finding comparable LRP contracts and puts for illicit purposes can be difficult in practice

In conclusion

- In addition to being illegal, subsidy harvesting is against the intent of LRP and can eliminate the downside risk protection provided by LRP
- Strong and quick response by RMA
- Research shows that subsidy harvesting may occur, but available evidence indicates that it is inherently risky, as well as limited in prevalence and profitability

Additional Resources

- NDSU Policy Brief: https://www.arpc-ndsu.com/post/subsidy-capture-in-livestock-risk-protection
- 508(h) Livestock Insurance: based on 2026 rules, might not apply to 2027
  - https://508h.commoditymarkets.com/on-subsidy-capture-using-private-contracts
  - https://508h.commoditymarkets.com/what-is-not-subsidy-capture
  - https://508h.commoditymarkets.com/three-way-strategies-combining-cme-options-and-lrp

Questions/Comments/Experiences?

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