

# Livestock Risk Protection-Payouts

## Price Risk Management for Cow-Calf Producers: Part 6

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Cow-calf producers use various [strategies](#) to manage [price risk](#), including [futures and options](#). Livestock Risk Protection (LRP) is a type of [livestock price insurance](#) that typically costs less than a put option. LRP makes payouts (indemnities) that [replace](#) the income that is lost due to a price decline. An LRP indemnity is calculated by taking (1) the producer-selected target weight (for example, 550 lbs for a feeder) times (2) the difference between the actual price and the producer-selected coverage price.<sup>1</sup> The larger the price decline, the larger an indemnity a producer receives. This article discusses the frequency and magnitude of LRP indemnities.

How often do indemnities occur? For the highest coverage levels, indemnities occur much more frequently than lower coverage levels. In table 1, we report the historic frequency of indemnities for LRP for feeder cattle from 2007-2021.<sup>2</sup> For the highest range of coverage levels, or coverage prices that were 97.5-100% of expected price, indemnities occurred about half of the time. Indemnities were higher than premiums about 40% of the time. Indemnities are frequent for these high coverage levels because only a small decline in prices is necessary to trigger an indemnity. For the lowest range of coverage levels considered (90-92.49%), indemnities only occurred 21% of the time. Indemnities occurred less often at lower coverage levels because actual prices only occasionally declined more than 10% below expected (futures) prices.

**Table 1. Frequency of LRP indemnities for feeder cattle from 2007-2021**

Coverage level	Share of LRP endorsements with	
	Any indemnity	Indemnity that is greater than the premium
97.5-100%	50%	40%
95-97.49%	40%	36%
92.5-94.99%	31%	28%
90-92.49%	21%	19%

Note: Estimates are based on the *Understanding Data and Markets* tool developed by Bozic, LLC, for 30-week endorsements for steers with a target weight of 550bs

There are two important notes of caution about the frequency of indemnities. First, historic experience does not perfectly predict the future. Second, indemnities occurring about half of the time for high coverage policies does not

<sup>1</sup> For a detailed example of indemnity calculation, see the previous article in this series at <https://agmanager.info/crop-insurance/livestock-insurance-papers-and-information/livestock-risk-protection-guarantee-price>

<sup>2</sup> The specific endorsement used for this example is for 30 weeks for steers up to 600 lbs; results do not vary substantially for heifers/other categories or higher weights or similar endorsement lengths.



mean that a producer can expect an indemnity every other year. A few years of significant price volatility or increasing prices could lead to multiple years without indemnities; there can also be years with back-to-back indemnities.

How large are LRP indemnities? The largest indemnities for feeder cattle were paid in 2015, going over \$20 per cwt for endorsements with the highest coverage levels (or coverage prices). Otherwise, indemnities over \$10 per cwt occurred relatively rarely, including in 2012 and briefly in 2020. In table 2, we report average long-term net indemnities, which are indemnities minus the premium cost, from 2007-12. This calculation includes years when no indemnities were paid, or when net indemnities would be negative. Average net indemnities for the highest coverage policies (97.5-100% coverage level) were \$2.39 per cwt or \$13.12 per head for a 550 lb feeder. Average net indemnities were negative for the lowest coverage, but very small.<sup>3</sup>

**Table 2. Frequency of LRP indemnities for feeder cattle from 2007-2021**

Coverage level	Average Net LRP Indemnity	
	Per cwt	Per head (550 lb feeder)
97.5-100%	\$2.39	\$13.12
95-97.49%	\$1.22	\$6.73
92.5-94.99%	\$0.16	\$0.90
90-92.49%	-\$0.27	-\$1.49

Note: Estimates are based on the *Understanding Data and Markets* tool developed by Bozic, LLC, for 30-week endorsements for steers with a target weight of 550bs. Net indemnities are calculate as the LRP indemnity minus the LRP producer premium.

We conclude with three points. First, indemnities are much more frequent for higher levels of LRP coverage. Second, since 2007, net indemnities have been larger for higher coverage levels. Third, even for the highest coverage policies, a few years can pass without an indemnity and the largest indemnities (i.e. indemnities greater than \$20/cwt) are relatively rare. LRP has both risk management and income benefits, consistent with both historic experience and the design of LRP. In the next article, we will discuss important policy details that any producer considering LRP should know.

*This article is the sixth in an 9-part [series](#) on price risk management for cow-calf producers. The first part of the series focused on price risk and different management alternatives. The later part of the series focuses on Livestock Risk Protection, an insurance product available to Kansas producers, that pays out when market prices for feeder cattle (or fed cattle or swine) are lower than expected. While LRP has been available for 2 decades, recently policy changes make*

<sup>3</sup> Like other policies that are part of the Federal Crop Insurance Program, the LRP premium subsidies make purchasing a policy more affordable and *typically lead* to the producer coming out ahead or receiving more in indemnities than premiums in the long term. While it may seem surprising to see negative net indemnities for the lower coverage policies, it is important to remember the following. (1) The premiums are small under the low coverage policies, as are the net indemnities. (2) Historic experience for a specific policy will not always reflect the *expected long-run outcome*, especially over a relatively short time period. (3) Low coverage policies are of most benefit during periods of catastrophic loss or very large price declines. These events happen relatively infrequently, thus any estimate of net benefits for low coverage policies will be very sensitive to the specific time range that is used.

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