Livestock Risk Insurance Plans for Cattle Producers

Cattle producers have two price risk management tools available to them that are offered by the United States Department of Agriculture Risk Management Agency (RMA).

- **Livestock Risk Protection (LRP)** provides protection against price declines.
- **Livestock Gross Margin (LGM)** provides protection against loss of gross margin (market value of livestock minus feed costs).

These products are available to producers of all sizes. These tools may fit a price risk management strategy for small- to medium-size producers that do not market the volume needed to optimally utilize conventional tools such as hedging and options contracts. Buying a livestock insurance policy is one of several risk management options to consider. Producers should always carefully consider how a policy will work in conjunction with their risk management needs and risk management strategies to insure the best possible outcome. Both LRP and LGM must be purchased through an authorized insurance agent. RMA provides a searchable database of insurance agent and provider information: www.rma.usda.gov/Information-Tools/Agent-Locator-Page.

Livestock Risk Protection for Cattle Producers

Livestock Risk Protection or LRP insurance has been available to livestock producers since 2003. Recent changes have added flexibility and incentives for producers wanting to use the product. For cattle producers, LRP is available to insure against the risk of price declines in feeder cattle or fed cattle that they own.

Details from RMA about LRP and more can be found on the RMA Livestock Insurance Plans policy page: www.rma.usda.gov/en/Policy-and-Procedure/Insurance-Plans/Livestock-Insurance-Plans.

LRP Terminology

Application: Completed by the producer and used to establish eligibility to buy coverage. An application needs to be completed before buying coverage through an insurance agent.

Coverage endorsement: Initiates LRP coverage on a specific type of livestock (e.g., fed cattle) for a specific period of time (e.g., 13 weeks).

Coverage price: A price determined daily that is based on the Chicago Mercantile Exchange (CME) feeder cattle or fed cattle contracts and the coverage level chosen. LRP coverage prices, rates and actual ending values are available from the RMA website: www.rma.usda.gov/Information-Tools/Livestock-Reports.

Coverage level: A percentage of the coverage price ranging from 70-100%.

Insured period: The time period in weeks for which price insurance is offered in an endorsement. There are 10 available periods ranging from 13 weeks to 52 weeks in four-week increments from when the coverage endorsement is enacted. The insured period should match the time closest to when covered cattle will be marketed. The insured period options were one recent change to provide increased flexibility for producers.

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Premium: The cost of the price insurance that is due at the end of the coverage period. The premium is calculated based on the coverage level and insured period chosen. The available coverage levels and associated premiums change each day and are available from when the futures markets close until 9 a.m. the next business day and are reported online: www.rma.usda.gov/Information-Tools/Livestock-Reports.

Premiums are subsidized by USDA at the rates shown in Table 1. Payment is due at the end of the endorsement period, not when the policy is put in place. Recent changes have increased the subsidy levels to encourage producers' use of LRP.

Table 1. Livestock Risk Protection Subsidy Rates for Feeder Cattle or Fed Cattle

Coverage Level	Subsidy
95-100%	35%
90-94.99%	40%
85-89.99%	45%
80-84.99%	50%
70-79.99%	55%

Endorsement limits: The number of head that can be covered in one coverage endorsement, ranging from one head to 6,000 head.

Annual policy limits: Number of head that can be covered in one year (July 1 through June 30) and ranges from one head to 12,000 head.

Indemnity: Paid to the policy holder (producer) if the coverage price is higher than the ending price reference at time of sale. Indemnity is paid within 60 days following the end of the coverage period.

CME feeder cattle index price: An index of feeder cattle prices at auctions in 12 US states (www.cmegroup.com/market-data/reports/commodity-index-prices.html). This index price at the end of the insured period is the ending reference price used to determine if there is an indemnity due to the policy holder for LRP feeder cattle.

Five area weekly weighted average direct slaughter cattle: A USDA reported price (https://mymarketnews.ams.usda.gov/viewReport/2477) for fed cattle, live FOB price. This price at the end of the insured period is used as the ending reference price to determine if there is an indemnity due to the policy holder for LRP fed cattle.

Basics of Using LRP Insurance Policies

The first step to purchase LRP Insurance is completion of an accepted application through an approved insurance agent. To enact LRP coverage, a specific coverage endorsement that defines the type of cattle, the chosen target selling weight and the insured period must be completed. The coverage endorsement includes the percent coverage level chosen and the amount of premium for the policy.

For **feeder cattle**, several types of cattle are covered. This includes: unborn calves, feeder cattle weighing less than 600 pounds (<600 pounds) and feeder cattle weighing 600-900 pounds that would be beef breed, Brahman, or dairy influence. Unborn calves were recently added to the coverage options.

For **fed cattle**, 1,000-1,400-pound steers or heifers expected to grade select or higher, with a USDA yield grade 1, 2 or 3 are covered. These types and weights are adjusted to the CME feeder cattle index or the 5-area weighted average price used for the ending value determination.

When the cattle are sold, the ending value as determined by the CME feeder cattle index for feeder cattle or 5-area weighted average weekly price for fed cattle is compared to the insured value. If the insured value is higher than the ending value an indemnity is paid to the policy holder. The cattle need to be owned 60 days prior to the end of the coverage period. The actual sale price of the cattle does not affect the indemnity calculation.

The following example provides a detailed view of how LRP works.

Example 1. LRP Feeder Cattle

A cow-calf producer is considering purchasing LRP on March 1 to insure a minimum price for 50 head of beef calves that are expected to be born in March and April and marketed December 1 at approximately 600-pounds.

The following table shows data available to the producer from the RMA website for [livestock reports](www.rma.usda.gov/Information-Tools/Livestock-Reports): www.rma.usda.gov/Information-Tools/Livestock-Reports. The producer can choose the coverage level desired.

Coverage Length*	Expected Price	Coverage Price*	Coverage Level - %	Premium per cwt.
39 weeks	$162.397	$162.29	99.93%	$9.712
39 weeks	$162.397	$153.89	94.76%	$5.631
39 weeks	$162.397	$149.69	92.18%	$4.154
39 weeks	$162.397	$145.49	89.59%	$3.009

*Other coverage lengths and corresponding prices are available.

The producer chose the 94.76% coverage level LRP to provide a minimum price as follows:

Insured value:
50 head × 6 cwt. x $153.89/cwt. = $46,167

Premium: 50 head × 6 cwt. × $5.631 × 60% (40% subsidy) = $1,014 ($20.27/head)

Cattle are sold at 37 weeks for $150/cwt.

The CME feeder cattle index at the end of the 39-week period is $149/cwt.

Calculated ending value:
50 head × 6 cwt. × $149/cwt. = $44,700

Indemnity payment: $46,167 insured value - $44,700 ending value = $1,467 paid to producer

The producer would pay $1,014 in premium.

Cattle need to be owned within 60 days prior to the end of the coverage. If cattle are sold 60 days before the end of the policy, the policy could be transferred to the new cattle owner if they are eligible.

To analyze the risk protection available under LRP insurance, see [Decision Tool B1-50: Livestock Revenue Protection Analyzer](www.extension.iastate.edu/agdm/livestock/xls/b1-50lrpanalysis.xlsx), www.extension.iastate.edu/agdm/livestock/xls/b1-50lrpanalysis.xlsx.

Livestock Gross Margin Protection (LGM)

Livestock Gross Margin Protection is available for fed cattle in all counties in Iowa. LGM protects the producer against the loss of gross margin. **Gross margin** is the market value of livestock minus feeder cattle purchase price and feed costs. LGM uses future prices to calculate an expected gross margin guarantee that is compared to actual gross margins using Chicago Mercantile Exchange (CME) prices to determine if indemnities are paid.

Specific Features

LGM insurance is sold only on the last business Friday of each month. The projected gross margins are posted soon after the close of markets on that day. Coverage can be purchased from that time until 8 p.m. central time on the following day. In case of unusual market circumstances, RMA reserves the right to not post the projected gross margins, in which case no coverage is available for that day.

LGM can be purchased for a group of cattle to be marketed over a rolling 11-month period. Cattle cannot be marketed in the first month of the insurance period. Producers choose coverage by deductible levels from $0 to $150 in $10 increments. There is no minimum number of animals required; however, the producer must choose two target marketing months to receive subsidies. Table 2 shows LGM subsidy rates.

Table 2. Livestock Gross Margin Subsidy Rates

Deductible	Subsidy
$0	18%
$10	21%
$20	25%
$30	30%
$40	37%
$50	47%
$60-$150	50%

Expected gross margin per head values for each marketing month can be found on the RMA website: www.rma.usda.gov/Information-Tools/Livestock-Reports.

Producers are asked to identify between a yearling feeding operation or calf feeding operation. The formula used is based on what type of operation is chosen. Yearling operations use 50 bushels of corn priced two months prior to the marketing month, 1,250-pound assumed market weight, and feeder cattle price five months prior at 750 pounds. Calf finishing operations use 52 bushels of corn priced four months prior, 1,150-pound assumed market weight, and feeder cattle price eight months prior at 550 pounds. Producers are also asked what months they are targeting for marketing of the animals. The number of target marketings in each month of the 11-month insurance period is chosen. These projections are used to calculate premiums that are due at the end of the insurance period. At the end of a target marketing month, actual gross margins are calculated. If the actual gross margins are calculated below the guaranteed gross margins, an indemnity will be paid for the difference. The producer must provide sales receipts for animals they have marketed to receive payment.

To determine premiums for LGM insurance visit the RMA premium calculator: https://ewebapp.rma.usda.gov/apps/costestimator.

Example 2. Livestock Gross Margin

An Iowa producer purchases LGM insurance on 50 head of calves they are feeding and expecting to market in the months of July, August, and September.

The insurance period starts March 1. The producer is expecting to market 10 head in July, 30 head in August, and the remaining 10 head in September.

If a $0 deductible is chosen, the chart below shows what the guaranteed gross margin would be for those three months.

Cattle (0803) Calf Finishing (807) March - January Insurance Period (903)										
	Month 2 (April)	Month 3 (May)	Month 4 (June)	Month 5 (July)	Month 6 (August)	Month 7 (September)	Month 8 (October)	Month 9 (November)	Month 10 (December)	Month 11 (January)
Expected Gross Margin	393.19	362.10	367.03	319.96	316.99	342.82	355.28	362.51	366.52	379.21
Actual Gross Margin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Using the RMA Premium calculator, the premium for this coverage would be $2,042 ($40.84 per head).
At the end of July, the Actual Gross Margin would be calculated as:

Simple average of daily settlement prices in the last three trading days of August CME live cattle futures × 11.5 cwt.
– (52 bushels of corn × Simple average of daily settlement prices in the last three trading days of April corn price)
+ (Simple average of daily settlement prices in the last three trading days of December CME Feeder Cattle × 5.5 cwt.)

If the Actual Gross Margin is calculated lower that the Guaranteed Gross Margin then an indemnity will be paid on the animals marketed that month.

At the end of each target marketing month, the producer would receive a “Notice of Probable Loss” and would have 15 days to submit a “Marketings Report” that includes sales receipts of cattle sold during that month to receive indemnities.

Indemnities are calculated as: (Guaranteed Gross Margin – Actual Gross Margin). If the Actual Gross Margin is higher than the Guaranteed Gross Margin, then no action is needed, and no indemnity will be paid. Death loss and performance loss are not covered, and sales receipts must be provided for animals to receive payment. Since prices are calculated from CME prices, local prices for feed, feeder cattle, and market price are not used. This leaves basis risk for the producer.

Who can benefit from revenue insurance?

Producers who depend on the daily cash market price or a formula based on it to sell their cattle can insure a minimum revenue stream. Unlike some marketing contracts, neither LGM nor LRP ties the producer to a specific packer.

LGM protection leaves producers exposed to futures market basis risk, i.e. their local cash prices may not track exactly with the CME prices. LRP contracts are settled against cash price indices, but these may still differ from local packer prices. In addition, the producers' actual selling weights and dates of sale may vary from the guarantees.

Livestock revenue insurance policies will not create profits in the market on their own, since coverage levels are tied to futures contract prices that are currently available. However, they will protect against the possibility that actual cash prices may turn out to be even lower than expected. They provide a safety net against a drastic decline in prices such as could happen when processing capacity is insufficient for the supply of livestock going to market. They can also be used when market price prospects are relatively good, to protect profits from unexpected downturns in price.

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