Extension
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Livestock Risk Protection (LRP) Insurance

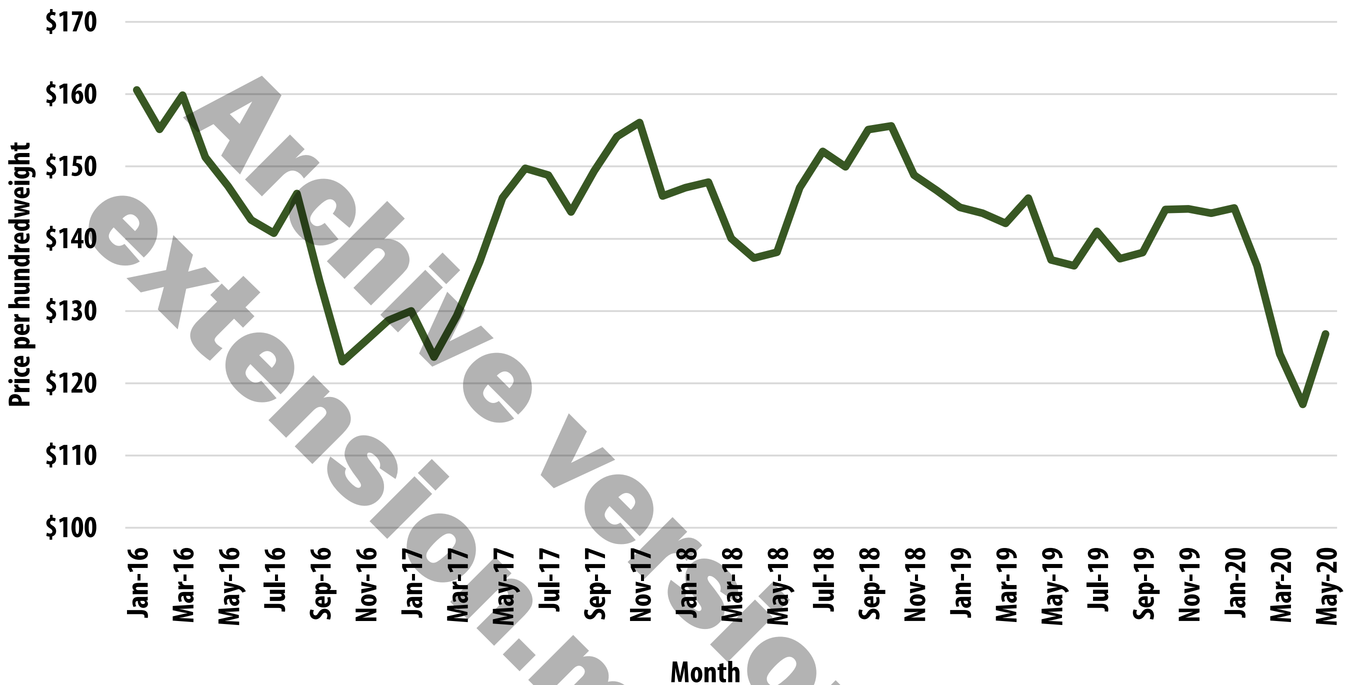

Figure 1. Nearby feeder cattle futures (2016–2020) demonstrate that price volatility can present a challenge to livestock producers.

Livestock risk protection (LRP) insurance offers livestock producers a way to manage risk associated with market price volatility (see Figure 1 for feeder cattle future prices). It does not protect against other perils such as disease or death. The U.S. Department of Agriculture's (USDA) Risk Management Agency (RMA) administers LRP insurance products. It is sold by approved livestock insurance agents throughout the year. LRP premiums are subsidized by the federal government. Policies are available in Missouri for feeder cattle, fed cattle, lamb and swine. Insured producers receive an indemnity when the actual ending value of livestock, as determined by RMA, is less than the coverage price chosen by the producer.

Revised by
Ryan Milhollin, State Specialist, Agricultural Business and Policy Extension
Ray Massey, Professor, Agricultural Business and Policy Extension

How LRP insurance works

A livestock producer must use an agent who is authorized to sell LRP insurance. The producer must fill out a one-time application to determine eligibility for LRP insurance. Once the application is accepted by the RMA, the producer may begin the process of purchasing a specific coverage endorsement (SCE).

An SCE requires specific information regarding the livestock to be insured:

- Number, type and weight of animals
- Endorsement length (number of weeks)
- Coverage level (percent)
- Ownership share (percent)

Producers indicate the type of animal to be covered and estimate their weights at the end of the coverage period. For feeder cattle, breed and sex characteristics must be identified. The length of the available endorsement will vary based on the animal species involved. The coverage level is a percentage of the livestock's expected ending value at a contract's expiration date. Premiums increase with the level of coverage. Producers must also indicate their level of ownership (must be greater than 10 percent) and adjust the coverage accordingly.

Feeder cattle, fed cattle and swine policies can be normally bought on any weekday, excluding holidays. The time frame for purchasing an SCE starts at 3:30 p.m. and lasts until 9 a.m. Central Time the next morning. Lamb policies can only be purchased on Mondays (a holiday will push them to the following day). Coverage and prices are determined daily by a series of data sets and calculators on the RMA website. If the RMA website offers no coverage and prices, producers will be unable to purchase LRP insurance for that day. The RMA also reserves the right to suspend sales at any time due to market or funding limitations.

Premiums

Premiums are calculated in a multistep process detailed in Figure 2. Actuarial rates depend on the coverage price and endorsement length selected. Premiums are to be paid at the end of the endorsement period.

Feeder cattle, fed cattle and swine subsidy levels vary (35 to 55 percent) depending on the coverage level. Lamb subsidy percent levels vary (20 to 38 percent) by coverage period.

1. Calculate total hundredweight sold = number of head × target ending weight (in cwt)
2. Calculate total value = total hundredweight × coverage price
3. Calculate insured value = total value × ownership share
4. Calculate premium = insured value × actuarial rate
5. Calculate premium paid by policyholder = premium – (premium × subsidy percent)

Figure 2. LRP premium calculations.

Indemnity

Indemnities are paid at the end of the insurance period based on the difference between the actual ending value and the coverage price selected by the producer. If the actual ending value is higher than the coverage price, no indemnity will be paid. Note that the target ending weight is in hundredweight (cwt). To collect the indemnity, a claim form must be submitted within 60 days of the policy's end date. Payments will be made within 60 days of a properly filed claim.

If the livestock is sold more than 30 days before the contract end date, producers cannot receive an indemnity and they do not get the premium payment back unless their share is properly transferred. Any animals that die during the coverage period should be reported within 72 hours to avoid reducing the endorsement.

Feeder cattle policy

LRP insurance for feeder cattle can provide coverage for calves, steers, heifers, predominantly Brahman or predominantly dairy cattle (Table 1). Ending weights can be either under 600 pounds or between 600 and 900 pounds. Feeder cattle can be insured for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52 weeks. Feeder cattle producers can select a price coverage level from 70 to 100 percent of the expected ending value. Only 6,000 head of feeder cattle can be insured under a single SCE, and only 12,000 head between the period July 1–June 30. LRP insurance uses the CME feeder cattle index as a price base. A price adjustment factor (Table 2) is used to calculate the coverage price and ending values from the CME feeder cattle index.

Table 1. LRP feeder cattle snapshot.

Type of cattle	Calves, steers, heifers, Brahman or dairy
Selling weights	Under 600 lbs. or 600–900 lbs.
Coverage period	13–52 weeks
Coverage level	70–100%
Ending value base	CME feeder cattle index
Maximum per SCE	6,000 head
Maximum per year	12,000 head

Table 2. Price adjustment factors for feeder cattle.

Weight range	Steers	Heifers	Brahman	Dairy
Under 600 lbs.	110%	100%	100%	50%
600–900 lbs.	100%	90%	90%	50%

Fed cattle policy

A fed cattle policy is fairly similar to a feeder cattle policy. Steers and heifers expected to finish select or higher quality grade and yield grade one to three are insurable (Table 3). Insured fed cattle must weigh between 1,000 and 1,400 pounds when marketed for slaughter at the end of the insurance period. Fed cattle can be insured for 13, 17, 21, 26, 30, 34, 39, 43, 47 or 52 weeks. Fed cattle producers can select a price coverage level from 70 to 100 percent of the expected ending value. This policy can insure 6,000 head under a single SCE, and a total of 12,000 head between the period July 1–June 30. The fed cattle price values in the policy are determined by a five area weekly weighted average direct slaughter cattle for steers that grade 35 to 65 percent choice as calculated by the USDA Agricultural Marketing Service.

Table 3. LRP fed cattle snapshot.

Type of cattle	Any heifers or steers
Selling weights	1,000–1,400 lbs.
Coverage period	13–52 weeks
Coverage level	70–100%
Ending value base	Five area weekly weighted average direct slaughter cattle, steers, 35–65% choice
Maximum per SCE	6,000 head
Maximum per year	12,000 head

Swine policy

LRP swine policies allow producers to insure market hogs (barrows and gilts) as detailed in Table 4. Target weight requirements dictate that swine under LRP coverage must weigh between 150 and 225 pounds on a lean (dressed weight) basis. To convert from live weight to dressed weight, use the lean conversion factor of 0.74. This adjustment would reflect live weights of 203 to 304 pounds. Swine can be insured for 13, 17, 21, 26 or 52 weeks. Swine producers can select a coverage level of 70 to 100 percent of the expected ending value. Contract and yearly limits state that 40,000 head can be covered under a single SCE, and 150,000 head can be insured between the period July 1–June 30. Swine price values are determined by the CME lean hog index.

Table 4. LRP swine snapshot.

Type of swine	Barrows and gilts
Selling weights	203–304 lbs. (live) 150–225 lbs. (lean)
Coverage period	13, 17, 21, 26 or 52 weeks
Coverage level	70–100%
Ending value base	CME lean hog index
Maximum per SCE	40,000 head
Maximum per year	150,000 head

Lamb policy

Feeder or slaughter lambs are insurable under LRP (Table 5). Weight requirements dictate that lambs should weigh between 50 and 150 pounds at the end of the coverage period. Lambs can be insured for 13, 20, 26 or 39 weeks, and lamb producers can select a coverage level between 80 and 95 percent. Livestock limits state that a maximum of 2,000 head can be covered per SCE, and 28,000 head between the period July 1–June 30. The calculated formula live price is based on the national weekly average lamb price as reported by the USDA.

Table 5. LRP lamb snapshot.

Type of lambs	Feeder or slaughter lambs
Selling weights	50–150 lbs.
Coverage period	13, 20, 26 or 39 weeks
Coverage level	80–95%
Ending value base	Calculated formula live price
Maximum per SCE	2,000 head
Maximum per year	28,000 head

LRP example

A producer in Missouri plans to sell 100 feeder cattle (steers) at a target ending weight of 750 pounds and owns 100 percent of the cattle. The expected ending value is $140 per hundredweight, and the producer wishes to elect a coverage level of 97 percent. The price adjustment factor is 100 percent for steers, so the coverage price is $135.80 per hundredweight ($140 × 100 percent × 97 percent). The USDA reports an actuarial rate of 0.036109.

Premium calculation

1. 100 cattle × 7.5 cwt = 750 cwt
2. 750 cwt × $135.80 coverage price = $101,850
3. $101,850 × 100% ownership share (1.0) = $101,850 insured value
4. $101,850 × 0.036109 actuarial rate = $3,677.70 total premium
5. $3,677.70 premium – ($3,677.70 premium × 20% subsidy rate) = $2,942.16 farmer paid premium, or $3.92 per cwt

Indemnity calculation

Using the same information in the above example, let's say that at the end of 21 weeks, the actual ending value for feeder cattle is $120 per hundredweight.

1. $135.80 coverage price – $120 actual ending value = $15.80 per cwt difference

The difference must then be multiplied by the total hundredweight to determine the indemnity payment owed to the producer.

2. $15.80 per cwt difference × 100 cattle × 7.5 target cwt × 100% share = $11,850 indemnity

Remember that the producer had to pay a premium, which means the indemnity received does not fully represent the gain or loss from purchasing the plan. The difference between the indemnity and premium needs to be calculated to find out the net gain or loss from the LRP plan.

3. $11,850 indemnity – $2,942.16 farmer premium = $8,907.84, or $11.88 per cwt, net gain from LRP plan

Advantages of LRP

LRP insurance provides protection against low market prices that could affect a farmer's ability to obtain a positive return. It performs similarly to a put option in the futures market in that it protects downside price risk. But LRP insurance offers many advantages over put options. It is simple to purchase and requires no broker commissions or margin calls. With put options, producers must contract in large increments of livestock. These increments can prove too large for smaller producers, and bigger producers run the risk of either under- or over-insuring livestock. LRP insurance allows producers to choose the exact number of livestock they wish to cover, within maximum head limitations per endorsement and per year.

Disadvantages of LRP

One disadvantage of LRP insurance is that the actual ending value is simply based on indexes and other data sets. Ending value may be different than the price a producer actually receives when selling livestock. Basis risk exists, and producers need to understand their local market.

Other disadvantages relate to a lack of flexibility and the occasional unavailability of LRP policies. Funding limitations may lead the USDA to suspend policy sales at any given point in the year. Once LRP policies are entered, producers are locked into coverage and selling timelines. Occasionally, the desired coverage options will be unavailable for purchase on a given day, or the only available choices may be at an unwanted coverage level or endorsement length. In that case, a producer would have to wait until a later date to purchase the insurance, potentially leading to major scheduling issues.

For more information

Please contact a livestock insurance agent who can provide further information and help you find a policy best suited to your operation. These resources include more information about LRP policies, as well as a way to find a nearby livestock agent:

- LRP coverage prices/rates: ***https://www.rma.usda.gov/en/Information-Tools/Livestock-Reports***
- Livestock agent locator: ***https://www.rma.usda.gov/Information-Tools/Agent-Locator-Page***

The guide is for educational purposes only. The information in this guide does not replace or supersede any procedures or modify any provisions contained in the complete insurance policies.

Original authors: Ryan Milhollin, Ray Massey, Bryce Bock

Extension
University of Missouri

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