Livestock Risk Protection Insurance (LRP): How It Works for Feeder Cattle

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Beef producers have several tools to manage price risk associated with marketing cattle including futures contracts, options, forward contracting and livestock risk protection insurance (LRP). Each tool has advantages and disadvantages, and each can be used effectively under different circumstances.

Futures contracts and options are structured with each feeder cattle contract being 50,000 pounds of feeder cattle (generally 60 to 80 head). The size of the contract generally fits best for larger producers. However, many cow-calf producers do not produce a sufficient quantity of uniform calves to manage price risk using futures contracts and/or options. Thus, the focus in this publication will be on LRP, because a producer can insure the price on as few as one head or up to 12,000 head.

LRP has been used successfully as a price risk management tool by a few cattle producers. However, the majority of cow-calf producers continue to produce cattle without using any type of price risk protection. The purpose of this publication is to:

1. Describe what LRP is and how it works for feeder cattle;
2. Discuss the timing and availability of LRP;
3. Explain specific coverage endorsements, coverage basics, coverage limitations and coverage indemnification; and
4. Provide an example to demonstrate when an indemnity is paid based on a specific policy.

What is LRP, and how does it work?

Livestock risk protection insurance (LRP) is a price insurance policy developed as a price risk management tool for feeder cattle, fed cattle, lamb and swine. It is administered by the USDA Risk Management Agency (RMA), which is the same agency that administers crop insurance to farmers. Similar to a put option, LRP provides a method to establish a floor selling price for livestock, and it protects against catastrophic price declines. For feeder cattle, an LRP insurance policy pays producers if a regional/national cash price index falls below a selected coverage price. Historically, large cattle price declines have occurred due to disease outbreaks in cattle (BSE, bovine spongiform encephalopathy), drought (2012 drought resulting in higher feed prices), industry disruptions (Tyson Holcomb slaughter facility fire) and human disease pandemics (COVID-19). The occurrence of a foodborne illness or some other market disruption could also contribute to a catastrophic price decline.

LRP is not designed to enhance livestock producers' profits, nor does it guarantee a cash price for the cattle. LRP strictly protects against declines in a regional/national cash price index. The idea is if prices in the region used to calculate the index rise, then prices in other regions should also have increased, and the same holds true for price declines. It does not protect against mortality, condemnation, physical damage, disease, individual marketing decisions, local price aberrations or any other cause of loss. In other words, LRP does not protect against any type of production risk.

LRP has a number of benefits such as providing the policyholder with flexibility in the timing of purchase, length of coverage, number of head covered (1 to 12,000 head), target weight of livestock at the end of coverage and the coverage price level. The benefits of LRP compared to futures and options include no margin calls and no quantity minimums. A third benefit is that lenders generally understand insurance, and LRP may be viewed more favorably as a price risk management tool than futures and options, thus allowing potentially more favorable borrowing terms and conditions.

Timing and Availability

Integral components of purchasing LRP include knowing when it is available for purchase, how to purchase insurance, and who to contact to purchase insurance. LRP is available throughout the year for producers to purchase. Sales are typically available for cattle Monday through Friday with each sales period beginning around 5 p.m. eastern time (4 p.m. central time) and ending at 10 a.m. eastern time (9 a.m. central) the following morning. It is also available Saturday morning until 9 a.m. eastern (8 a.m. central). LRP cannot be purchased on Sunday, Monday morning or federal holidays. The timing/availability of insurance coverage is one of the major drawbacks to the use of LRP as its availability for purchase is largely outside of "normal business" hours.

There are instances when LRP coverage is not attainable and cannot be purchased by anyone. They include:

1. Coverage cannot be approved unless accepted by the Federal Crop Insurance Cooperation's (FCIC) Underwriting Capacity Manager (UCM) website;
2. When government funding limits (daily or annual) are reached;
3. If the required data for establishing rates or coverage prices are not available;
4. If there has been a news report, announcement or other event that occurs during or after trading hours that is believed to result in market conditions significantly different than those used to determine rates for the LRP program;
5. If there are two or more consecutive days of price limit moves on feeder cattle futures contract; or
6. If the RMA online system is crowded or down.

Specific Coverage Endorsements, Coverage Basics and Indemnifying Coverage

Two forms must be completed to utilize LRP. The first form is the policy/application that only needs to be completed once unless changing agents, while the second form, specific coverage endorsement (SCE), must be completed every time coverage is purchased. A producer must first complete a policy/application with the provider before purchasing LRP. Completing a policy/application does not obligate the policyholder to purchase insurance. There are a number of providers in the state willing to work with producers to meet producer price insurance needs. The Risk Management Agency with the US Department of Agriculture hosts an agent locator website for LRP for a given state and county[1]. LRP must be purchased through one of these approved insurance providers.

LRP policies begin on the effective date of insurance purchase and run for the selected number of weeks, completing on the end date. Potential insurance periods offered include 13, 17, 21, 26, 30, 34, 39, 43, 47 and 52 weeks. The appropriate insurance period for a producer desiring to insure a cattle price is the number of weeks closest to when the cattle will be marketed. LRP coverage levels can range from 70 percent to 100 percent of the expected ending price (approximately the futures price for the given time period) and is calculated based on the chosen coverage price relative to the expected ending value. It is important to note not all coverage levels or all weeks of insurance periods are offered each day. Therefore, a policy meeting the goals of the operation may not be available today, but such a policy may be offered at a future date.

A producer or family member must own the cattle to insure them using LRP and ownership must be maintained until 60 days prior to the specific coverage endorsement end date for insurance to maintain its value. The day of a video auction, even if cattle are not to be delivered until sometime in the future, is considered the sale date. There is no restriction on cattle being marketed after the end date of the specific coverage endorsement. Thus, cattle do not have to be sold to receive an indemnity payment. Any portion of insured livestock disposed of prior to the last 60 days of coverage results in that portion of the coverage terminating with no indemnity being paid for neither that portion nor any of the premium being refunded. Records must be kept for three years after the end date of any specific coverage endorsement. The policyholder must retain and provide upon request, complete records of the ownership of a producer's share and disposition (sale records) of all livestock insured for the applicable period(s).

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[1] LRP Agent Locator website: prodwebnlb.rma.usda.gov/apps/AgentLocator/#/.

LRP insurance premiums are based on an expected ending value (EEV) of the cattle and a coverage price level. The expected ending value is very near the futures price for that particular end date and is derived from the futures market. The coverage price is a percentage of the expected ending value, chosen by the producer. The expected ending value is compared to the actual ending value (AEV), which is the cash price of the commodity on the end date, to determine if an indemnity payment is to be received by the producer/policyholder. The actual ending value is based on the weighted average price as defined in each specific coverage endorsement. For feeder cattle, the actual ending value is based on the CME feeder cattle reported index[2], multiplied by the price adjustment factor for the type of feeder cattle.

There are limitations on the quantity of cattle that can be insured in a federal crop year. The annual policy limit from July 1 through June 30 is 12,000 head for feeder cattle. Additionally, there are limitations per specific coverage endorsement of 6,000 head for feeder cattle. However, there is no limitation on the number of specific coverage endorsements that can be written except when the number of head limitation is met. RMA subsidizes 35 to 55 percent of the premium cost of a specific coverage endorsement based on coverage level (Table 1).

Table 1. Livestock Risk Protection Insurance Subsidy Rates

Coverage Level (%)	Subsidy Rate (%)
95.00-100	35
90.00-94.99	40
85.00-89.99	45
80.00-84.99	50
70.00-79.99	55

For the purpose of LRP Feeder Cattle coverage, feeder cattle are categorized by two weight ranges (Weight 1 — less than 600 pounds; Weight 2 — 600 to 900 pounds) and five types (steer, heifer, predominately Brahman, predominately dairy and unborn calves). The actual ending value is based on the CME feeder cattle cash index price which is a national average cash market price for 700- to 900-pound steers. The reported index is a seven-day weighted average of USDA reported prices from a 12-state region (Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming) using prices from auctions, video and internet sales, and direct trades. If insuring heifers or a different weight range, the LRP insurance contract is still indemnified on the CME feeder cattle cash index price (700- to 900-pound steer price). Price adjustment factors by weight class and cattle type are available in Table 2 for LRP feeder cattle.

Table 2. Livestock Risk Protection Feeder Cattle Price Adjustment Factors[a]

Weight	Steers	Heifers	Unborn Steers and Heifers	Predominately Brahman	Unborn Predominately Brahman	Predominately Dairy	Unborn Predominately Dairy
Weight 1 (< 600 pounds)	110%	100%	105%	100%	100%	50%	50%
Weight 2 (600-900 pounds)	100%	90%	N/A	90%	N/A	50%	N/A

[a] *Multiply feeder cattle index by Price Adjustment Factor to calculate expected ending value (EEV), coverage prices, and actual ending value (AEV).*

Indemnifying of Insurance Coverage Example

An example worksheet for LRP feeder cattle is available in worksheet 1 to demonstrate the calculation of premiums paid and cost per head for LRP insurance. Worksheet 2 is an example of how LRP indemnity payments are calculated and what the actual realized price would be given three different actual ending value price scenarios. One of the first questions many producers considering purchasing insurance will ask is if they can afford to pay for the insurance premium. A better question is if a producer can afford not to have price insurance coverage. Worksheet 1 and worksheet 2 can be used to answer both questions.

[2] The CME Feeder Cattle Index can be found at: cmegroup.com/market-data/reports/cash-settledcommodity-index-prices.html.

Considering worksheet 1 and assuming a producer is evaluating purchasing LRP on 20 steer calves projected to weigh 700 pounds at time of marketing in 21 weeks, what is the total insurance premium cost and what is the per head cost? The total insurance premium cost is dependent on the coverage price, coverage rate (premium rate), weight of the animal and the number of animals being insured. Considering the available coverage prices and rates available in figure 2, there are four coverage price levels available for a 21-week endorsement. For illustration purposes, suppose a producer chose the coverage price, coverage level and rate highlighted in figure 2. With this information, the total premium and the cost per head can be calculated using worksheet 1.

Figure 2. Livestock Risk Protection Coverage Prices, Rates and Actual Ending Values for 03/15/2021.

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	End Date	Actual End Value
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$155.720	0.988300	0.038955	6.066	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$153.720	0.975600	0.033743	5.187	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$151.720	0.962900	0.029007	4.401	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$149.720	0.950200	0.024773	3.709	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$147.720	0.937500	0.021047	3.109	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$145.720	0.924800	0.017836	2.599	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$143.720	0.912100	0.014967	2.151	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$141.720	0.899400	0.012631	1.790	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$139.720	0.886700	0.010657	1.489	08/09/2021	
47 Tennessee	998 All Counties	21	0801 Feeder Cattle	810 Steers Weight 2	208 Endorsement Ending in August Yr1	2021	157.566	$137.720	0.874000	0.008851	1.219	08/09/2021	

Worksheet 1 Premium Cost Example: Twenty head (Worksheet 1: Line 1 which will be denoted as W1:L1) of steers weighing 700 pounds (W1:L2) results in the coverage of 14,000 pounds (W1:L3) or 140 hundredweight (cwt.) of feeder cattle (W1:L4). As previously stated, the steers are expected to be marketed in 21 weeks and thus an endorsement length of 21 weeks (W1:L5) is used. The expected ending value for a 21-week endorsement is 157.566 (W1:L6) and the coverage price chosen is $153.72 (W1:L7) which results in a coverage level of 0.9756 or 97.56 percent (W1:L8). The premium rate associated with the coverage price is 0.033743 (W1:L9) resulting in a cost per hundredweight of $5.187 (W1:L10). The USDA subsidizes LRP at a rate of 35 percent (W1:L11) for the associated coverage level resulting in a subsidized cost per hundredweight of $3.372 (W1:L12). The total insured value of 20 steers weighing 700 pounds is $21,520.80 (W1:L13) resulting in a total producer premium of $472.01 (W1:L14). Thus, the total premium cost per head is $23.60 (W1:L15).

Worksheet 1. Livestock Risk Protection Insurance Premium Calculation

Line	Item	Values	Description/Calculation
1	Number of head to be covered	20	Chosen by the producer
2	Projected selling weight (lbs.)	700	Expected weight of cattle by sale date
3	Total pounds of coverage (lbs.)	14,000	Line 1 × Line 2
4	Total cwt. of coverage (cwt.)	140	Line 3 ÷ 100
5	Endorsement length (weeks)	21	Available on LRP Coverage website*
6	Expected ending value (EEV)	157.566	Available on LRP Coverage website
7	Coverage price ($/cwt.)	153.720	Available on LRP Coverage website
8	Coverage level (%)	97.56%	Line 7 ÷ Line 6
9	Premium rate (Rate)	0.033743	Available on LRP Coverage website
10	Cost per cwt. ($/cwt.)	5.187	Line 7 × Line 9
11	Subsidy (%)	35%	USDA subsidy rate is 13 percent
12	Subsidized cost per cwt. ($/cwt.)	3.372	Line 10 × (1 - Line 11)
13	Insured value (Total $ insured)	21,520.80	Line 4 × Line 7
14	Producer total premium ($)	472.01	Line 13 × (1 - Line 11) × Line 9
15	Premium cost per head ($/head)	23.60	Line 14 ÷ Line 1

*LRP Coverage website: public.rma.usda.gov/livestockreports/main.aspx

Worksheet 2 Indemnity Payment Example: LRP insurance is indemnified only on the effective ending date of the policy. Worksheet 2 is constructed to illustrate indemnity payments based on the actual ending value of the CME feeder cattle index (W2:L1) being less than or greater than the purchased coverage price. Worksheet 2 also helps in the calculation of the actual (realized) price received for the cattle marketed. If the coverage price of $153.72 (W2:L4) is less than the actual ending value of the CME feeder cattle index (W2:L1) then no indemnity payment is received. If the coverage price is greater than the actual ending value then an indemnity payment is due to the insurance policy holder. In the example, if the actual ending value is $145.00 per hundredweight and the coverage price is $153.72 per hundredweight then the policy holder would receive an indemnity payment of $8.72 per hundredweight (W2:L5) or $61.04 per head (W2:L8) for a 700-pound steer. The total indemnity payment for the 20 steers would be $1,120.80 (W2:L9).

The indemnity payment received from an insurance policy is not contingent on the actual cash price received when a producer markets cattle. It is assumed in Worksheet 2 that the cash price received by the producer is $10 per hundredweight (W2:L2) less than actual ending value which is a -$10 basis. The term basis actually refers to the difference in the cash price and the futures price (Cash Price – Futures Price = Basis) on a given day. However, basis in this example is the difference between the cash sale price and the actual ending value, because the actual ending value will be very near the futures price on the day of policy indemnification. Thus, the producer's realized price per hundredweight would be the cash sale price (W2:L3) plus the insurance indemnity payment (W2:L5) minus the subsidized cost of insurance (W2:L10). Given the example, the producer received a cash price of $135.00 per hundredweight (W2:L3) plus an indemnity payment of $8.72 per hundredweight (W2:L5) at a cost of $3.37 per hundredweight (W2:L10) resulting in a realized price of $140.35 per hundredweight (W2:L11). Worksheet 1 and worksheet 2 with blanks provided to evaluate a given policy offering are included at the end of this publication and are labeled as worksheet 3 and worksheet 4.

Worksheet 2. Livestock Risk Protection Insurance Indemnity Payment and Realized Price

Line	Item	Price Scenario Values			Description/Calculation
1	Actual Ending value ($/cwt.)	145.00	155.00	165.00	Chosen for demonstration purpose
2	Basis ($/cwt.)	-10.00	-10.00	-10.00	Futures price - Cash price
3	Cash sale price ($/cwt.)	135.00	145.00	155.00	Line 1 + Line 2
4	Coverage price ($/cwt.)	153.72	153.72	153.72	Available on LRP Coverage website
5	Indemnity per cwt. ($/cwt.)	8.72	0.00	0.00	If Line 4 is less than Line 1 then indemnity payment is $0 Otherwise: Line 4 - Line 1
6	Number of head covered	20	20	20	Chosen by the producer
7	Selling weight (lbs.)	700	700	700	Weight of cattle at sale date
8	Indemnity per head ($/head)	61.04	0.00	0.00	Line 5 × (Line 7 ÷ 100)
9	Total indemnity	1,120.80	0.00	0.00	Line 6 × Line 8
10	Subsidized cost per cwt. ($/cwt.)	3.372	3.372	3.372	Subsidized cost from worksheet 1
11	Realized price per cwt. ($/cwt.)	140.35	141.63	151.63	Line 3 + Line 5 - Line 10

As mentioned earlier, cattle do not have to be marketed on the insurance policy end date. However, failure to market cattle on or as close to the policy end date as possible increases price risk associated with marketing cattle. For example, if cattle were not marketed until four weeks after the end date then cattle prices could increase, decrease or stay the same. Regardless of whether an indemnity payment was received, a price decrease would result in a loss to the producer whereas a price increase could benefit a producer.

Conclusion

Livestock risk protection insurance can be used effectively by cattle producers with any number of head. **LRP is a price risk management tool available to livestock producers to protect against major financial losses due to catastrophic price declines. It is not meant to increase cattle producer profits, but is rather meant to reduce losses when prices decline and save the producer from losing the farm.** It may be easiest to think of purchasing insurance as a business expense to ensure the business has long term viability.

Figure 1. Specific Coverage Endorsement Form for Livestock Risk Protection.

12 LRP-Specific Coverage Endorsement

LIVESTOCK RISK PROTECTION
SPECIFIC COVERAGE ENDORSEMENT FORM

Commodity Code:	**Policy Number:**	**Endorsement Number: (Company Use only)**

1. INSURED				**2. INSURANCE AGENCY**		
Insured Name:		Spouse's Name:		Insurance Agency Name: Food & Fiber Risk Managers		Agency Code:
SSN:	EIN:	Spouse's SSN:		Insurance Agent's Name: Burdell Johnson		Agent Code:
Farm or Business Name:		E-mail address:		E-mail address: bjohnson@fafrm.com		
Street or Mailing Address:				Street or Mailing Address: 208 Main St N PO Box 6		
City:		State:	Zip Code:	City: Tuttle	State: ND	Zip Code: 58488
County:		Phone:		Phone: 701-867-9160	Fax: 701-867-9161	
Legal Description of location of livestock or livestock product:		State:	Zip Code:			

3. SCHEDULE OF INSURED LIVESTOCK OR LIVESTOCK PRODUCT

Crop Year	Effective Date	End Date	No. of Head Covered	Insured Share %

4. INSURED VALUE

Number of Head		Target Weight (Cwt. Per Head)		Coverage Price		Insured Share (%)		Insured Value
	X		X		X			

5. PREMIUM COMPUTATION

Insured Value		Rate		Total Premium	Producer Premium	Approval Number
	X					

CONDITIONS

a. I certify that I have a share in the livestock identified in this Specific Coverage Endorsement to the extent of the percentage insured share that I have stated. I will provide documentation to affirm ownership of my share of the livestock or livestock product to the company, its authorized agent, or any designated employee of USDA upon request.

b. I do not have any other insurance authorized under the Federal Crop Insurance Act on this class of livestock or livestock product.

c. I agree to on-site inspections by the Company's representative and any designated employee of USDA to verify my ownership and share in the covered livestock or livestock product.

CERTIFICATION STATEMENT

I certify that to the best of my knowledge and belief all of the information on this form is correct. I also understand that failure to report completely and accurately may result in sanctions under my policy, including but not limited to voidance of the policy, and in criminal or civil penalties (18 U.S.C. §1006 and §1014; 7 U.S.C. §1506; 31 U.S.C. §3729, §3730 and any other applicable federal statutes).

Insured Signature ____________ Date ____________

Printed Name ____________

IN WITNESS WHEREOF, this application has been accepted by an Authorized Agent of the Company.

Agent Signature ____________ Printed Name ____________ Date ____________

Worksheet 3. Livestock Risk Protection Insurance Premium Calculation

Line	Item	Values	Description/Calculation
1	Number of head to be covered	___________	Chosen by the producer
2	Projected selling weight (lbs.)	___________	Expected weight of cattle by sale date
3	Total pounds of coverage (lbs.)	___________	Line 1 × Line 2
4	Total cwt. of coverage (cwt.)	___________	Line 3 ÷ 100
5	Endorsement length (weeks)	___________	Available on LRP Coverage website*
6	Expected ending value (EEV)	___________	Available on LRP Coverage website
7	Coverage price ($/cwt.)	___________	Available on LRP Coverage website
8	Coverage level (%)	___________	Line 7 ÷ Line 6
9	Premium rate (Rate)	___________	Available on LRP Coverage website
10	Cost per cwt. ($/cwt.)	___________	Line 7 × Line 9
11	Subsidy (%)	___________	USDA subsidy rate is 13 percent
12	Subsidized cost per cwt. ($/cwt.)	___________	Line 10 × (1 - Line 11)
13	Insured value (Total $ insured)	___________	Line 4 × Line 7
14	Producer total premium ($)	___________	Line 13 × (1 - Line 11) × Line 9
15	Premium cost per head ($/head)	___________	Line 14 ÷ Line 1

*LRP Coverage website: public.rma.usda.gov/livestockreports/main.aspx

Worksheet 4. Livestock Risk Protection Insurance Indemnity Payment and Realized Price

Line	Item	Price Scenario Values			Description/Calculation
1	Actual Ending value ($/cwt.)	________	________	________	Chosen for demonstration purpose
2	Basis ($/cwt.)	________	________	________	Futures price - Cash price
3	Cash sale price ($/cwt.)	________	________	________	Line 1 + Line 2
4	Coverage price ($/cwt.)	________	________	________	Available on LRP Coverage website
5	Indemnity per cwt. ($/cwt.)	________	________	________	If Line 4 is less than Line 1 then indemnity payment is $0 Otherwise: Line 4 - Line 1
6	Number of head covered	________	________	________	Chosen by the producer
7	Selling weight (lbs.)	________	________	________	Weight of cattle at sale date
8	Indemnity per head ($/head)	________	________	________	Line 5 × (Line 7 ÷ 100)
9	Total indemnity	________	________	________	Line 6 × Line 8
10	Subsidized cost per cwt. ($/cwt.)	________	________	________	Subsidized cost from worksheet 6
11	Realized price per cwt. ($/cwt.)	________	________	________	Line 3 + Line 5 - Line 10

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