Livestock Risk Protection Insurance for Feeder Cattle

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This NebGuide discusses the use of Livestock Risk Protection (LRP) Insurance as a price risk tool for feeder cattle producers.

Livestock Risk Protection (LRP) Insurance is a price-risk management tool available to feeder and fed cattle producers as well as swine and lamb producers. This single-peril insurance program is offered by USDA Risk Management Agency (RMA) and is available from licensed agents through the private crop insurance industry. An LRP policy allows producers to protect against the risk of national prices falling below an established coverage price. While LRP covers price risk, it does not cover production or mortality risks. This NebGuide will discuss how to use LRP in a feeder cattle framework with an example, followed by a discussion on implications.[1]

LRP is similar to a put option. It allows producers to establish a floor price for protection while leaving upside price potential open. The producer pays a subsidized premium for the price insurance in order to establish the floor price. Unlike market contracts and options, LRP does not require a margin account or broker. Other advantages of LRP are that it does not require a minimum number of cattle to be insured and 13 percent of the premium is subsidized by the government.

Feeder Cattle Insurance Elements

Producers can purchase LRP coverage by filing a Specific Coverage Endorsement (SCE). Feeder cattle LRP policies insure cattle based on two weight classes: less than 600 pounds and 600 to 900 pounds. Within these two weight categories, steers, heifers, and Brahman and dairy breeds can be insured. Bull calves of any breed that are expected to weigh less than 600 pounds can also be insured. Producers may also select different insurance

periods (or endorsement lengths). LRP is offered for 13, 17, 21, 26, 30, 34, 43, 47, or 52 week periods, but coverage for all periods may not be available on a given day. Producers should purchase the insurance with an ending date that matches their risk management objectives. The endorsement length should reflect the time between when the SCE is filed and the time the feeder cattle are expected to be marketed. However, it is important to understand that ownership of the animals may be retained after the insurance period without affecting the policy coverage. In order for coverage to be provided, the premium must be paid on the day the insurance is purchased.

LRP insurance contains a number of rules. Producers can insure between one and 2,000 head of cattle per the insurance year. The insurance year runs from July 1 to June 30. There is a limitation of 1,000 head of cattle per SCE and producers must maintain ownership of the cattle until at least 30 days prior to the end date of coverage. If sold prior to the 30 days, the coverage can be transferred to the new owner or forfeited. Coverage prices between 70 percent and 100 percent of the expected ending value can be selected. Daily LRP coverage prices, rates, actual ending values, and per hundredweight cost of insurance can be viewed at RMA's website: *http://www3.rma.usda.gov/apps/livestock_reports/main.aspx*. Not all coverage levels may be available on a given day. The actual ending values are posted at the end of the insurance period and are based on weighted average prices as reported in the CMEGroup Feeder Cattle Price Index. The weighted average price is compared to the coverage price to determine whether or not an indemnity will be paid. An adjustment factor (*Table I*) is used to adjust the expected and actual ending values of feeder heifers, lighter weight calves, or Brahman or dairy breeds.

How Livestock Risk Protection Works

Once a producer's application for coverage is approved, the producer can activate coverage by applying for an SCE at any time. When using LRP insurance, a producer will select

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[1]LRP Insurance for other livestock operates in a similar fashion but does have some differences in the contract specifications.

Table I. Price adjustment factors

Weight Range	Steers	Heifers	Predom. Brahman	Predom. Dairy
< 600 lb (Weight I)	110%	100%	100%	85%
600–900 lb (Weight II)	100%	90%	90%	80%

a coverage price in order to hedge against downside price risk. The coverage price is based on a percentage coverage level, between 70 percent and 100 percent, of an expected ending value of the cattle to be insured. The expected ending values reflect the expected price of feeder cattle when the coverage period ends. These are posted daily on the RMA website: *http://www3.rma.usda.gov/apps/livestock_reports/ main.aspx*.

Working through an example for feeder cattle in Nebraska, we can calculate the insured value (coverage price multiplied by the number of cattle and weight of the cattle), producer's premium, and the indemnity based on the producer's chosen endorsement length and coverage level.

Assume a Nebraska producer has 100 head of feeder steers on Aug. 1. He plans to feed the cattle until the first of December when he will decide whether to market them, retain ownership for additional winter grazing, or to move

them to a feedlot. He owns 100 percent of the steers and he would like to purchase LRP-Feeder Cattle insurance on them with an end date in early December. He expects the steers to weigh 700 pounds the beginning of December so they would be classified as Steers Weight 2 (600-900 pounds) for LRP-Feeder Cattle insurance purposes. The Aug. 5, 2014, RMA actuarial data the producer will use is found in *Table II*[2]. Using the producer decision point of December, the LRP endorsement length will be 17 weeks. The expected ending value for the 17-week endorsement period is $216.773 per hundredweight (*Table II*) with the contract end date of Dec. 2, 2014. If the producer decides on a coverage level of 93.66 percent, the coverage price will be $203.02 per hundredweight at a premium rate of 0.011792 (*Table II*).

[2]Note: not all coverage levels or endorsement periods will be available each day.

Table II. LRP expected end values, coverage prices, and rates for Nebraska feeder cattle, steers weight 2, Aug. 5, 2014[a]

Endorsement Length	Crop Year	Exp. End Value Per CWT	Coverage Price Per CWT	Coverage Level	Rate	Cost Per CWT	End Date
13	2015	$219.252	$215.10	0.9811	0.022599	$4.861	11/4/2014
13	2015	$219.252	$211.10	0.9628	0.016078	$3.394	11/4/2014
17	2015	$216.773	$203.02	0.9366	0.011792	$2.394	12/2/2014
17	2015	$216.773	$201.02	0.9273	0.009924	$1.995	12/2/2014
17	2015	$216.773	$199.02	0.9181	0.008366	$1.665	12/2/2014
21	2015	$214.560	$200.81	0.9359	0.014442	$2.900	12/30/2014
21	2015	$214.560	$198.81	0.9266	0.012449	$2.475	12/30/2014
21	2015	$214.560	$196.81	0.9173	0.010726	$2.111	12/30/2014
26	2015	$213.301	$202.18	0.9479	0.021298	$4.306	2/3/2015
30	2015	$211.569	$200.44	0.9474	0.023603	$4.731	3/3/2015

Source: *http://www3.rma.usda.gov/apps/livestock_reports/main.aspx*
[a]Note: Not all coverage levels or endorsement periods will be available each day.

Insured Value and Premium Calculations:

		Example	Your Case
	Insured Value and Premium Calculations for Feeder Cattle Example		
		Example	*Your Case*
1.	Number of head (whole number)	100	
2.	Target weight at end date (cwt. per head)	7.00 cwt	
3.	Coverage price (see *Table II*)	$203.02	
4.	Insured share (x.xx)	1.00	
5.	**Total insured value** (Line 1 X Line 2 X Line 3 X Line 4)	**$142,114**	
6.	Rate (see *Table 2*)	0.011792	
7.	**Total premium** ($) (Line 5 X Line 6)	**$1,676**	
8.	Subsidy rate (percent)	13%	13%
9.	**Subsidy** (rounded to nearest $) (Line 7 X Line 8)	**$218**	
10.	**Total premium** (Line 7 – Line 9)	**$1458**	

Indemnity Calculation:

If the actual ending value is less than the coverage price, an indemnity is due. Alternatively, if the actual ending value is greater than the coverage price, an indemnity is not due. The actual ending value per hundredweight for feeder cattle is determined at the end of the insurance period. Indemnities are calculated as the number of head multiplied by the target weight (in hundredweight per head), multiplied by the difference between the coverage price and the actual ending value (in dollars per hundredweight), and then multiplied by the ownership share (percentage). Actual feeder cattle sales weights and prices at the end of the endorsement period **do not** enter into indemnity calculations.

Continuing with the above example, assume that on the end date of coverage, the CMEGroup Feeder Cattle Index has increased to $207.50 per hundredweight. An indemnity in this case will not be paid because the actual ending value is greater than the coverage value of $203.02 per hundredweight. If, however, the CMEGroup Feeder Cattle Index falls to $199.50 per hundredweight on the end date of coverage, an indemnity will be paid since the actual ending value is less than the coverage price ($203.02 − $199.50 = $3.52 per hundredweight). The indemnity is calculated as follows:

		Example	Your Case
	Indemnity Calculations for Feeder Cattle Example		
		Example	*Your Case*
1.	Number of head (whole number)	100	
2.	Target weight at end date (cwt. per head)	7.00 cwt	
3.	Coverage price (see *Table II*)	$203.02	
4.	Actual ending value	$199.50	
5.	Coverage price minus actual ending value (Line 3 – Line 4)	$3.52	
6.	Insured share (x.xx)	1.00	
7.	**Total indemnity** (Line 1 X Line 2 X Line 5 X Line 6)	**$2,464**	

Note that the producer would have paid $1,458 for this insurance and, therefore, the net indemnity will be $1,006.

When the actual ending value falls relative to the coverage price, the indemnity is paid. In our example, the minimum sales price ($203.02 per hundredweight) is obtained using the LRP indemnity of $3.52 per hundredweight plus selling the feeder cattle in the cash market at $199.50 per hundredweight. If the feeder cattle are sold for more than the $199.50 per hundredweight in the cash market, the producer will receive a price higher than the insured minimum sale price. Alternatively, if the producer sells the feeder cattle in the cash market for less than $199.50 per hundredweight, the net price received will be less than the insured minimum sales price. The basis (difference between the CMEGroup Feeder Cattle Index and the actual cash market sales prices) is critical when using LRP to manage price risk due to the fact that LRP does not lock in basis. Producers need to understand and anticipate the basis in the market in which they sell cattle.

Applying for LRP

A feeder cattle producer must apply for an LRP policy through a licensed crop or livestock insurance agent. Eligible agents can be found using the Agent Locator Tool provided by the USDA (*http://www3.rma.usda.gov/apps/ agents/index.cfm*). The application process establishes a producer's eligibility to purchase LRP insurance. Enrollment in the program is free and establishes the right, but not the obligation, to purchase coverage. After the appli-

cation is accepted, producers can purchase LRP coverage by filing an SCE with a licensed LRP agent, who will verify the number of cattle that will be insured. Producers establish coverage level, insured value, premium, and the length of coverage when they file the SCE. Coverage can be purchased from the time rates are set and validated based on the current day's CME prices (approximately 3:30 p.m. Central time) until approximately 9:00 a.m. Central time the following day.

LRP Implications for Producers

LRP insurance programs focus only on reducing downside price risk for feeder cattle producers. At the core, the LRP program provides a price floor for feeder cattle but allows producers to take advantage if higher prices are realized. Other risks still exist. The program does not cover sickness or death of the cattle and does not protect overall revenue since it only locks in the sales price for feeder cattle but does not cover rising feed costs. Basis risk (the risk that basis declines relative to their forecast used to create their expected minimum sales price) is also another source of price risk LRP does not eliminate.

As feeder cattle prices have skyrocketed, LRP may be a good option as part of a producers risk management strategy. The value of the LRP contracts will depend on the premiums for the contracts relative to other risk management tools available to the producer. The LRP program does offer another alternative to the producer's choices for price risk management and may be a good option for smaller producers.

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