Risk Management

Livestock Risk Protection

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Livestock Risk Protection (LRP) insurance is a single-peril insurance program offered by the Risk Management Agency (RMA) of USDA through commercial crop or livestock insurance vendors. An LRP policy protects producers from adverse price changes in the underlying livestock market. The policy does not cover any other peril, such as death or disease. LRP is a pilot program currently available in all counties of 37 states (Fig. 1).
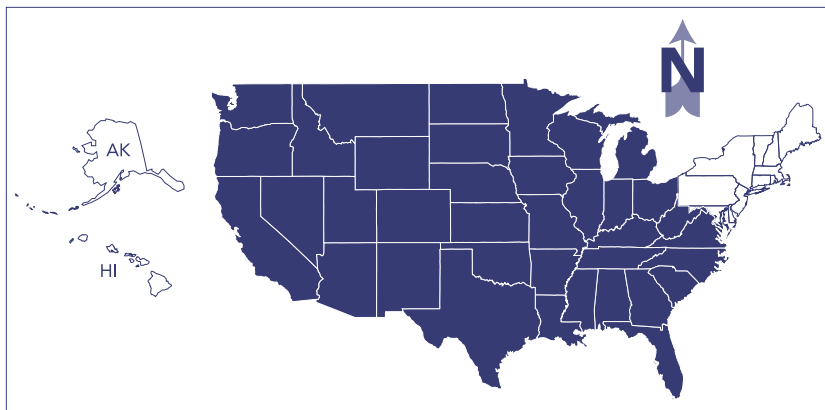

Figure 1: Livestock Risk Protection - Fed Cattle and Feeder Cattle.

How LRP Works

A producer must submit an LRP policy application through an authorized crop or livestock insurance vendor. Insurance vendors must have completed an RMA training program to become authorized. The application process establishes a producer's eligibility by documenting his or her substantial beneficial interest in the cattle. A producer with a partial interest in a group or pen of cattle may independently insure his or her portion. After completing the policy application, producers select a **coverage price** and **endorsement length** that meets their risk management objectives. This information may change daily and is posted on the RMA Web site. Table 1 lists key RMA Web sites.

The coverage price is a percentage of the **expected ending value**. This value and the associated rates are based on the current day's closing futures prices, volume and volatility; they correspond to separate endorsement lengths. The difference between the expected ending value and the coverage price is similar to the deductible on an auto insurance policy. A larger deductible (a lower coverage price relative to the estimated ending value) corresponds to a lower premium.

Endorsement lengths are in increments of about 30 days from 13 to 52 weeks. Both feeder cattle and fed cattle producers will want to purchase price risk insurance with an ending date of coverage that meets their risk management objectives. Feeder cattle producers may want the end date of coverage to match the

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expected date the cattle will be sold or moved to a feedlot. Fed cattle producers, on the other hand, will want to match the ending date of coverage with the anticipated date the cattle will be ready for slaughter. Both policies, however, can be purchased with shorter endorsement lengths.

LRP coverage does not begin until a **Specific Coverage Endorsement** (SCE) is submitted and accepted by RMA. The submission of the SCE to the RMA is done online after the application has been accepted. The SCE specifies the elected coverage price, the specific number of head covered, and the length of coverage. LRP policies require that sales be allowed from the time rates are set and validated (based on the current day's CME prices) to 9:00 a.m. Central time the following day. Once the SCE is accepted, the coverage is in place and a premium is due. If, at the ending date of coverage, the **Actual End Value** has dropped below the selected coverage price, the producer can claim an indemnity but must file for it within 60 days. The indemnity will be paid whether or not the cattle were sold by the ending date of coverage. However, selling the cattle more than 30 days before the end of coverage will terminate the policy unless the insurance provider has specifically approved the sale. Cattle seized, quarantined, destroyed or not salable because of death or disease will still be covered by the policy if written notice of the circumstances is provided within 72 hours.

It is crucial for producers to understand that the ending value of the LRP contract is not the cash price received or a closing futures price as of the end date of the policy. The LRP-Feeder Cattle policy uses the Chicago Mercantile Exchange (CME) feeder cattle price index as the actual end value. This cash-settled commodity index is a mathematical calculation that averages the headcounts, weights and prices from numerous livestock sales across the nation to determine its settlement price. The LRP-Fed Cattle policy uses a weekly weighted average of the slaughter cattle prices in five areas as reported by the Agricultural Marketing Service (AMS).

Table 1. Key LRP Web sites.

LRP agent locator	*http://www3.rma.usda.gov/apps/agents/*
LRP premium calculator	*http://www3.rma.usda.gov/apps/premcalc/*
Endorsement lengths, coverage prices, rates and end dates	*http://www3.rma.usda.gov/apps/livestock_reports/main.aspx*
CME Feeder Cattle Index	*http://www.cme.com/trading/dta/hist/cash_settled_commodity_prices.html*
AMS five-area, weekly weighted average for direct slaughter cattle	*http://www.ams.usda.gov/mnreports/lm_ct150.txt*

Table 2. Price adjustment factor for LRP-Feeder Cattle contracts.

			Predominately	
Weight range	Steers	Heifers	Brahman	Dairy
<6.0 cwt	110%	100%	100%	100%
6.0 – 9.0 cwt	100%	90%	90%	80%

Table 3. Contract specifics for LRP-Fed Cattle and LRP-Feeder Cattle policies.

	LRP-Fed Cattle	LRP-Feeder Cattle
Insurable cattle	Yield grade 1 to 3, 10 to 14 cwt	Heifers and steers, up to 9 cwt
End value based on (revised daily)	5-area weekly weighted average for slaughter cattle as reported by AMS	CMW feeder cattle index
Authorized endorsement length	13 to 52 weeks	13 to 52 weeks
Coverage levels	70 to 100%	70 to 100%
Premium subsidy	13%	13%
Maximum head insured per SCE	2,000	1,000
Maximum insured per crop year	4,000	2,000

Contract Specifics

Feeder cattle policies insure all feeder cattle weighing up to 900 pounds. They will cover heifers and Brahma and dairy breeds. A fixed percentage price adjustment factor (PAF) is used to adjust the expected ending values and coverage price from standard-weight, beef breed feeder cattle for various combinations of lightweight heifers or non-beef breeds. Table 2 shows the LRP feeder cattle price adjustment factor percentages. The PAF is also applied to actual end values at a contract's end date.

LRP-Fed Cattle policies provide coverage for fed cattle that will weigh 1,000 to 1,400 pounds at slaughter. Table 3 lists the contract specifics for both the feeder and fed cattle contracts.

Let's work through an example to calculate the insured value, producer's premium and indemnity.

Example 1: LRP-Feeder Cattle for a West Texas cow-calf producer

In mid-October, the owner of a 340-head cow-calf operation is buying an LRP-Feeder Cattle policy for his current calf crop. The calves are typically weaned (88 percent calf crop) about September 15 each year and carried over to the middle of January before the producer decides whether to market them, retain ownership for additional winter grazing, or move them to a feedlot. It is estimated that by mid-January the steer calves will average 700 pounds and the heifers will average 650 pounds. Coverage

will be purchased on all of the heifers, including those that will be retained as replacements. This producer has no partners and owns 100 percent of the calves. This producer will use actuarial data from the RMA on October 15, 2007, which is shown in Table 4.

Table 4. LRP expected end values, coverage prices, levels, rates and contract end dates for October 15, 2007.

Livestock type	Expected end value	Coverage price	Coverage level	Rate	Cost per cwt.	End date
Steers	$113.819	$107.97	.9486	.014411	$1.556	01/14/2008
Heifers	$102.437	$97.17	.9486	.014411	$1.40	01/14/2008

Source: *http://www3.rma.usda.gov/apps/livestock_reports/main.aspx*

Insured value and premium calculations

1. The Insured Value = Number of Head multiplied by the Target Weight (live weight, in cwt) multiplied by the Coverage Price multiplied by Ownership Share.

Number of head (whole number)	X	Target weight at end date (cwt per head)	X	Coverage price (as shown on Table 4)	X	Insured share (x.xxx)	=	Insured value ($)
150 steers	X	7.00 cwt	X	$107.97	X	1.00	=	$113,369
150 heifers	X	6.5 cwt	X	$97.17	X	1.00	=	$94,741
						Total insured value =		$208,110

2. The Total Premium = Insured Value multiplied by the Rate.

	Insured value ($)	X	Rate (as shown in Table 4)	=	Total premium ($)
Steers	$113,369	X	.014411	=	$1,634
Heifers	$94,741	X	.014411	=	$1,365
			Total premium =		$2,999

3 The Subsidy = Total Premium multiplied by the Subsidy Rate. The subsidy rate is 13 percent.

Total premium ($)	X	Subsidy (percent)	=	Subsidy ($)
$2,999	X	.130	=	$390

4 The Producer Premium = Total Premium minus the Subsidy.

Total premium ($)	-	Subsidy ($)	=	Producer premium ($)
$2,999	-	$390	=	$2,609

Other LRP Applications

Other situations in which LRP may offer producers limited price insurance are presented in examples 2 and 3. The calculations for insured value, total premium, producer premium and indemnities are similar to those in example 1, though each producer's situation is slightly different.

Example 2: An LRP-Feeder Cattle policy for a south plains wheat pasture/stocker operator

Indemnity Calculation

Assume that on the end date of coverage, the CME feeder cattle index has dropped to $103.50 per cwt. Since the actual ending value is less that the coverage price ($107.97 - $103.50 = $4.47), an indemnity is due the producer on the insured steers. The PAF for heifers is applied to the actual ending value ($103.50 x 90 % = $93.15). Again, an indemnity is due on the heifer calves ($97.17 - $93.15 = $4.02). The indemnity is equal to the number of head multiplied by the target weight (in cwt as defined in the specific coverage endorsement), multiplied by the difference between the coverage price and the actual ending value (in dollars per cwt), and then multiplied by ownership share (percentage).

Number of head (whole number)	X	Target weight at end date (cwt per head)	X	Coverage price minus actual ending value	X	Insured share (x.xxx)	=	Indemnity ($)
150 steers	X	7.00 cwt	X	$4.47	X	1.00	=	$4,693
150 heifers	X	6.5 cwt	X	$4.02	X	1.00	=	$3,919
						Total indemnity =		$8,612

A Texas producer placing weaned calves on wheat pasture in mid-November can purchase coverage at weaning on those calves coming off the pasture in mid-March, assuming they are expected to weigh less than 900 pounds.

Example 3: An LRP-Fed Cattle policy for a fed cattle producer

A Texas producer who will send yearling cattle from summer pasture to a feedlot can buy coverage, at the time of placement into the pasture or feedlot, on cattle to be slaughtered the next spring, assuming they will weigh between 1,000 and 1,400 pounds.

Attractive Attributes of LRP Policies

LRP policies have several attributes that may appeal to Texas livestock producers. The fact that policies will be sold at the rates ($ cost per cwt) quoted on the RMA Web site will appeal to producers who have tried to purchase a CME put option but failed because of light trading on that particular day or simply not being able to get an order placed and filled at the desired price.

LRP policies can be tailored to fit producers of different sizes. Producers can insure as few as one head to as many as 2,000 head (4,000 for fed cattle policies). The futures and options market provides risk management tools in 50,000-pound increments (40,000 pounds for fed cattle), which may not be flexible enough for many producers.

The subsidized premium of an LRP policy may also appeal to producers. However, the 13 percent subsidy may not offset the some of the lost flexibility or limitations of LRP policies. Producers need to be sure they thoroughly understand LRP policies and not focus just on the cost relative to other risk management tools. Producers may receive better loan terms from their lenders on LRP-insured cattle.

Disadvantages of LRP Policies

LRP is basically an insurance policy. Once this policy has been purchased and is in place, it cannot be offset or exercised until the end date of coverage. Selling the insured cattle more than 30 days before the end date of coverage may void

the policy. These restrictions place a premium on planning and make it necessary to have a working knowledge of price seasonality and relative price strength.

Local basis risk is still an issue facing producers who use LRP policies. Local basis is defined as the difference between local markets and the CME. Increased investor interest in the commodity markets may be widening local basis and making it less predictable. The difference in basis (CME futures vs. cash settled index) is not likely to increase the utility of LRP to Texas producers

Feeder cattle producers who want to buy coverage at the same time cattle are purchased and producers who want to buy LRP coverage at the most distant end dates of coverage may find their choices of coverage prices limited. A producer may have to wait several weeks for the right combination of ending date and coverage price to become available.

RMA also retains the right to suspend the sale of LRP policies if the market becomes unstable. The criteria for the suspension of sales are the same for LRP-Feeder Cattle and LRP-Fed Cattle policies. If four or more of the respective CME contracts trade the limit up or down for two consecutive days, LRP sales will be suspended. All previously sold policies will remain in effect with no change in the coverage or cost of coverage. LRP sales will resume if and when there have been two consecutive days without there being four or more CME contracts equaling or exceeding the daily price limit.

Summary

LRP is an insurance tool that may help with risk management role once a producer identifies his risk management objectives (risk tolerance, cost parameters, etc.) and understands the limitations of LRP. Producers will need to learn evaluate LRP in comparison with other risk management strategies that use CME futures and option contracts at different periods in the production cycle.

LRP policies are intended to insure against a drop in the underlying livestock market. As an insurance policy, LRP will not increase or enhance gross revenue. LRP policies also do not guarantee a cash price or basis level for the local market.

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