Agricultural Marketing Policy Center

BRIEFING

Briefing No. 82

May 2006

Livestock Risk Protection for Fed Cattle in Wyoming

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Objective

Analysis

for Informed

Decision Making

Background

Federally-subsidized yield and/or revenue insurance products for crops are offered in many counties in Wyoming. Historically, federally-subsidized offerings of livestock and livestock-related risk management products have been limited to crops produced for livestock feed and, for a short time, a dairy options pilot program.

In late 2002 the Risk Management Agency (RMA) approved a price risk management product for fed cattle. This insurance product is now available in every county of 20 states including Wyoming. The product is also offered in Colorado, Iowa, Kansas, Nebraska, Nevada, Oklahoma, South Dakota, Texas, Utah, Illinois, Indiana, Minnesota, Michigan, Missouri, Montana, North Dakota, Ohio, West Virginia, and Wisconsin. The product for fed cattle is referred to as LRP-Fed Cattle. Livestock Risk Protection insurance is also available for feeder cattle and swine in these states.

Elements of LRP-Fed Cattle

LRP-Fed Cattle is designed to insure against declining market prices for fed cattle. Specifically, the producer is insured against a decline in national fed cattle prices below an established coverage price. The insurance is applicable to fed cattle that the producer expects to grade *select* or higher with a yield grade of 1 to 3 that will be marketed for slaughter between 1,000 and 1,400 hundred pounds at the end of the insurance period.

LRP- Fed Cattle *target* weights refer to the anticipated weights of fed cattle, on a hundredweight basis, at the end of an insurance period. LRP-Fed Cattle insures cattle that are "*steers* and *heifers*." Therefore *target weight* refers to the average weight for all covered cattle, allowing for differences in market weights between heifers and steers.

LRP-Fed Cattle insurance is offered for 13, 17, 21, 26, 30, 34, 39, 43, 47, or 52 week periods (*endorsement length*). Producers are expected to select an *endorsement length* closest to the time fed cattle are to be marketed.

Procedure for Obtaining LRP-Fed Cattle Coverage

Producers must apply for LRP-Fed Cattle insurance coverage through a crop insurance agent. Not all crop insurance agents are authorized to sell LRP. A *Substantial Beneficial Interest Reporting Form* must be submitted with the application. This form records pertinent information on any entity that has at least a 10 percent share in the fed cattle for which the application is submitted. This beneficial interest form facilitates the establishment of eligibility and tracks insurance limits.

Once an application for coverage is approved by a company and a policy number is assigned, a producer may activate coverage at any time by applying for a *Specific Coverage Endorsement.* This endorsement is used to initiate coverage for a specific group of fed cattle to be marketed at or near the end date of the endorsement. Each *Specific Coverage Endorsement* is limited to 2,000 head of fed cattle. More than one *Specific Coverage Endorsement* may be purchased each crop year. *Endorsement lengths* and *coverage prices* may differ among endorsements. However, no more than 4,000 head of fed cattle per entity may be covered by LRP-Fed Cattle in any crop year. The crop year for LRP-Fed Cattle insurance is July 1 through June 30.

Coverage Prices and Levels

Coverage prices are the prices that can be insured by a producer. *Coverage prices* are calculated based on the *expected ending value* of the fed cattle to be insured. *Expected ending values* are posted most business days on a RMA website (http://www3.rma.usda.gov/ apps/ livestock_reports/). *Expected ending values* reflect prices for fed cattle that are expected to occur at the end of the coverage period. *Coverage levels* range from 70 to 95 percent of *expected ending values*. *Coverage prices* are known to the producer at the time LRP-Fed Cattle coverage is attached to a group of fed cattle.

Table 1 presents an example from RMA's website (only a portion of the first page) as of October 3, 2005. Table 1 presents *expected ending values* by *endorsement length* and *coverage levels* for steers and heifers in Wyoming. Note that the *expected ending values* for Wyoming fed cattle with a 13-week endorsement were $89.751 per hundredweight for all coverage levels. For a contract with a 13-week endorsement period and a *coverage level* of 93.37 percent, the *coverage price* was $83.80 per hundredweight.

Insured Value and LRP-Fed Cattle Premium Calculations

Insured value is calculated as:
Insured Value = Number of Head x Target Weight at End Date (in hundredweight per head) x Coverage Price x Insured Share

Total premiums are calculated as:
Total Premium = Insured Value x Rate

The total premium calculations are rounded to the nearest whole dollar and then referred to as *Rounded Total Premium*.

Producer premiums are subsidized by the Federal government. The *total subsidy* is calculated as:

Total Subsidy = 0.13 (13 percent subsidy for all premiums) x Rounded Total Premium

The Total Subsidy is rounded to the nearest whole dollar and referred to as the *Rounded Subsidy*

The net *Producer Premium* is calculated as:

Producer Premium = Rounded Total Premium - Rounded Subsidy

Table 1: Partial Replica of LRP-Fed Cattle Expected and Actual Ending Values, Coverage Prices and Rates for Wyoming Steers and Heifers, 10/05/05

Endorsement Length	Crop Year	Expected End Value	Coverage Price	Coverage Level	Rate	Cost Per Cwt	End Date	Actual End Value
13	2006	89.751	$83.800	0.93370	0.009320	$0.781	1/02/2006	
13	2006	89.751	$81.800	0.911400	0.006870	$0.562	01/02/2006	
13	2006	89.751	$79.800	0.889100	0.003634	$0.2900	01/02/2006	
13	2006	89.751	$77.800	0.866800	0.002738	$0.213	01/02/2006	
13	2006	89.751	$75.800	0.844600	0.002164	$0.164	01/02/2006	
13	2006	89.751	$73.800	0.822300	0.001653	$0.122	01/02/2006	
13	2006	89.751	$71.800	0.800000	0.001184	$0.085	01/02/2006	
13	2006	89.751	$69.800	0.777700	0.000946	$0.065	01/02/2006	
13	2006	89.751	$67.800	0.755400	0.000737	$0.050	01/02/2006	
17	2006	90.929	$87.980	0.934600	0.011932	$1.014	01/30/2006	
17	2006	90.929	$82,980	0.912600	0.009484	$0.787	01/30/2006	
17	2006	90.929	$80.980	0.890600	0.005594	$0.453	01/30/2006	
17	2006	90.929	$78.980	0.868600	0.004533	$0.358	01/30/2006	

An Example Premium

Consider a situation in which a producer had a 100 percent interest in 1,000 head of 900 pound steers and heifers on October 3, 2005. The producer plans to market the fed cattle on or near January 2, 2006. The cattle are expected to average 1,175 pounds per head at that time. The producer's LRP-Fed Cattle *endorsement length* would be 13 weeks. On October 3, 2005, the *expected ending value* for contracts with a 13-week endorsement period was $89.751 per hundredweight (Table 1). If the producer had selected a *coverage level* of 93.37 percent, the producer's *coverage price* would have been $83.80 per hundredweight at a premium rate of 0.009320 (Table 1). The producer premium for this example is calculated as:

Insured Value = 1,000 head x 11.75 hundredweight/animal x $83.80 per hundredweight x 1.0 = $984,650.

Rounded Total Premium = $984,650 x 0.009320 = $9,177.

Rounded Subsidy = $9,177 x 0.13 = $1,193.

Producer Premium = $9,177 - $1,193 = $7,984.

The premium must be paid on the day the insurance is purchased for coverage to be provided.

Indemnity Calculation:

An indemnity is due if the *actual ending value* is less than the *coverage price* selected by a producer. As noted above, the *coverage price* is selected on the day the insurance policy is attached. *Coverage prices* range from 70 to 95 percent of *expected ending values*. The *actual ending value* for fed cattle at the end of the endorsement is the price of fed cattle as calculated by the Agricultural Marketing Service (AMS) in a report titled "5 Area Weekly Weighted Average Slaughter Cattle." The price series is the Live Basis Sales, Steers, "35-65% Choice" category. The AMS report is available on the Internet at http://www.ams.usda.gov/mnreports/1m_ct150.txt. This report is released once a week. The report used to calculate actual ending value will be the report from the week that contains the end date of the endorsement.

An indemnity payment will be made on those fed cattle specified in a *Specific Coverage Endorsement* based on the expected ending weight of the fed cattle that was selected when the insurance was attached. In the case of death loss, a producer is expected to notify the insurance company within 72 hours. If notice of death loss is not provided in a timely fashion, then coverage will be reduced by the number of dead animals. A producer's **actual fed cattle sales weights** and **prices** at end of the endorsement period **do not** enter into indemnity calculations. The actual ending value per hundredweight for fed cattle is available at the end of the insurance period. The indemnity is calculated as:

Indemnity = [*Number of Head Insured x Target Weight x (Coverage Price - Actual Ending Value)*] x *Insured Share*

An Indemnity Example:

Returning to the above example, the 5 Area Weekly Weighted Direct Slaughter Report for the week that included January 2, 2006 reported an *actual ending value* for fed cattle of $93.890 per hundredweight, as reported in Table 2. This producer would not receive an indemnity because the actual end value on January 2, 2006 was greater than the *coverage price* of $83.80.

For illustrative purposes, assume that the *actual ending value* was reported as $80.00 per hundredweight. Then the indemnity would have been calculated as:

Indemnity = [1,000 head x 11.75 hundredweight/head x ($83.80 - 80.00)] x 1.0. = $44,650.

Note that the producer paid $7,984 for this insurance. Consequently, the net indemnity would have been $36,666.

Off-Setting Transactions

Producers are not allowed to enter into any transactions that would convert the premium subsidy provided by the Federal Crop Insurance Corporation into funds available for personal use. Such transactions include obtaining positions in the commodity futures or options markets that offset the risk being managed by LRP-Fed Cattle coverage. Although there are several possibilities, producers are not allowed to enter into transactions such as the following for fed cattle covered by a *Specific Coverage Endorsement*:

(1) The selling of a CME Live Cattle *put option* contract on the insured cattle, or

(2) The buying of CME Live Fed Cattle *futures contracts* on the insured cattle.

LRP-Fed Cattle Insurance Differences with CME Live Cattle Options

LRP insurance and CME live cattle options have some similarities. However, differences also exist. The CME live cattle options are only available in specified total pound increments. For all practical purposes, CME options have no maximum limits on quantity insured. Conversely, LRP-Fed Cattle insurance may choose to insure fed cattle under specific coverage endorsement up to a maximum of 2,000 head per endorsement and 4,000 head in any crop year.

Table 2: Partial Replica of LRP-Fed Cattle Expected and Actual Ending Values, Wyoming Coverage Prices and Rates for Steers and Heifers, 10/03/05

Endorsement Length	Crop Year	Expected End Value	Coverage Price	Coverage Level	Rate	Cost Per Cwt	End Date	Actual End Value
13	2006	89.751	$83.800	0.93370	0.009320	$0.781	1/02/2006	93.890
13	2006	89.751	$81.800	0.911400	0.006870	$0.562	01/02/2006	93.890
13	2006	89.751	$79.800	0.889100	0.003634	$0.2900	01/02/2006	93.890
13	2006	89.751	$77.800	0.866800	0.002738	$0.213	01/02/2006	93.890
13	2006	89.751	$75.800	0.844600	0.002164	$0.164	01/02/2006	93.890
13	2006	89.751	$73.800	0.822300	0.001653	$0.122	01/02/2006	93.890
13	2006	89.751	$71.800	0.800000	0.001184	$0.085	01/02/2006	93.890
13	2006	89.751	$69.800	0.777700	0.000946	$0.065	01/02/2006	93.890
13	2006	89.751	$67.800	0.755400	0.000737	$0.050	01/02/2006	93.890
17	2006	90.929	$87.980	0.934600	0.011932	$1.014	01/30/2006	
17	2006	90.929	$82,980	0.912600	0.009484	$0.787	01/30/2006	
17	2006	90.929	$80.980	0.890600	0.005594	$0.453	01/30/2006	
17	2006	90.929	$78.980	0.868600	0.004533	$0.358	01/30/2006	

A producer who sells a put option or buys a futures contact incurs the full costs of those transactions. Conversely, a producer who buys LRP-Fed Cattle coverage receives a 13 percent subsidy on total premium costs.

Evaluating the Use of LRP-Fed Cattle by Wyoming Producers

To a large extent, the usefulness of LRP-Fed Cattle to a fed cattle producer depends upon the relative tradeoffs of price risk versus basis risk. Fed cattle basis refers to the difference between local Wyoming cash fed cattle prices and the value reported in the weekly AMS "5 Area Weekly Weighted Average Direct Slaughter Cattle" report. Producers are encouraged to use their sales records to evaluate this basis over time and seasonally within the year. Producers need to evaluate if historical relationships are good predictors of future relationships. Producers may want to consider LRP-Fed Cattle insurance if basis risk is less than price risk.

LRP-Fed Cattle may be of interest to both those buying feeder cattle and feeding them to slaughter weight and cow-calf producers or stocker cattle operators who retain feeder cattle and feed their own feeder cattle to slaughter weight. All such producers are limited to 2,000 head of fed cattle per *Specific Coverage Endorsement* and 4,000 head of fed cattle (1,000 to 1,400 pounds) per crop year per entity. These restrictions may limit the use of LRP-Fed Cattle for larger cattle feeding operations. However such operations often resort their cattle into different lots or groups based on performance and weights during the feeding period.

Operators may choose to use LRP-Fed Cattle to manage risks on groups of cattle that would only represent a partial futures contract. Some Wyoming cow-calf producers or those who run stocker cattle operations may retain ownership of their feeder cattle and have them custom fed in a Wyoming feedlot. Such producers may avail themselves to LRP-Fed Cattle for price risk management. And some Wyoming cow-calf producers or stocker operators may retain ownership and place their feeder cattle in custom feedlots in another state. They may use LRP-Fed cattle insurance if the other state is one where this price insurance product is offered.