Livestock Risk Protection: Insuring Calves

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Livestock Risk Protection: Insuring Calves

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Historically high cash prices for calves, general price volatility, and concern that prices could move lower may lead producers to insure calf prices. Livestock Risk Protection (LRP) is an insurance program that covers a single peril: lower prices.

LRP is still a pilot program with a small federal subsidy on the premiums. Insurance agents sell the policies. LRP coverage settles to cash prices, so there are no delivery concerns and generally reduced basis risk compared to other tools. When the coverage ends, LRP pays an indemnity if the market price has fallen below the coverage price. The Risk Management Agency (RMA) administers LRP on a fiscal year basis. For example, FY2008 is from July 1, 2007 to June 30, 2008.

Cow-calf producers are likely to be most interested in the LRP-Feeder Cattle policy, which can be specified to cover calves expected to weigh less than 600 pounds when the coverage ends. Calf prices are determined using price adjustment factors to feeder steer prices that act as price slides or basis additions.

LRP is appealing for use on calves because there is no minimum number of head to cover, making coverage cheaper than other tools such as put options. Producers can also cover calves under shared ownership arrangements with LRP. The coverage is available from 13 to 52 weeks out, depending on whether underlying feeder cattle contracts are trading.

How LRP works
A floor price is available for a given end date and type of cattle. Generally, the shortest end dates are routinely quoted. To assess the coverage available, a producer should decide when the cattle will be marketed (or how long the coverage is desired). Then, the LRP quotes are examined to determine if an end date within 30 days of the marketing date is offered.

For a given end date there will be an expected end value for a given type of cattle that tracks futures prices. For example, the expected end value may be $100 per cwt (Fig 1).

For each end date there may be multiple coverage levels available, corresponding to different deductible levels. The coverage level ranges from 70% to 100% of the expected end value. FY2008 is the first year with the 100% level available. In the example, the chosen coverage occurs at the 95% level, giving a coverage price of $95 per cwt (Fig 1).

LRP indemnity payments are figured relative to the coverage price. If prices fall by the end date, then LRP pays any difference if the actual end value is below the coverage price. In the example, if the actual end value falls to $92 per cwt, then LRP would pay $3 per cwt or the dif-
ference between $92 per cwt and $95 per cwt. The end value is the national feeder steer price observed on the end date (with any price adjustment factors applied).

The coverage comes at a cost. LRP premiums generally track options prices, with a small subsidy. Premiums are paid at the time the coverage is purchased. Thus, the cost of LRP is incurred regardless of what happens to cattle prices by the end date. The premium should thus be subtracted off the coverage price to arrive at the floor price. For example, if the premium (after the subsidy) is $2 per cwt, the floor price would be $93 per cwt (Fig 1).

Note that all the cattle prices and premiums are set based on national prices. The selling price for calves the producer receives does not affect the insurance. A producer’s basis would ultimately affect the floor price, but only because of local quality or market conditions.

Additional considerations
Typically in July, coverage is available with end dates from October through March of the following year. Under the LRP-Feeder Cattle policy, prices for steers expected to weigh less than 600 lb by the end date are adjusted to 110% of the heavy steer prices. The actual ending value is the heavy steer price adjusted by 110%.

The expected end value on heavy steers is close to the feeder cattle futures price with a similar expiration date. Thus, if the futures price is $100 per cwt the steer calf expected ending value will be close to $110 per cwt. Heifer calves have an expected ending value on a par with the heavy steer price.

Premiums for LRP across coverage levels vary widely. Consider a typical policy on steer calves with a coverage period of 21 weeks and an ending value of $110.00. At an assumed volatility level of 18% (the volatility is the uncertainty in the futures market and it drives the cost for the coverage), the premium for the 100% coverage level would be $4.32 per cwt. per cwt. and result in a floor price of $105.68 per cwt. (Table 1). As coverage levels decline, premiums fall quickly but floor prices also decline.

The actual premiums available may differ from the estimated levels. The program is structured such that not all coverage levels are available at all times. Changing parameters from the base case would also affect premiums.

<table>
<thead>
<tr>
<th>Coverage Level (%)</th>
<th>Premium ($/cwt)</th>
<th>Floor Price ($/cwt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>4.32</td>
<td>105.68</td>
</tr>
<tr>
<td>95</td>
<td>2.28</td>
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<td>80</td>
<td>0.10</td>
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<tr>
<td>75</td>
<td>0.02</td>
<td>82.48</td>
</tr>
<tr>
<td>70</td>
<td>0.00</td>
<td>77.00</td>
</tr>
</tbody>
</table>

Notes: Assumes an ending value of $110.00, coverage for 21 weeks and implied volatility of 18%. Premiums reflect the 13% subsidy.

Consider how the following changes impact the estimated $4.32 premium at the 100% coverage level. Lowering the coverage period to 17 weeks would reduce the premium by $0.41 per cwt. Raising the volatility to 20% would increase the premium by $0.48 per cwt. Raising the ending value by $10 would increase the premium by $0.40 per cwt and result in a floor price of $115.28.

Prior to the program changes in FY2008, sales volume of LRP was fairly low in South Dakota. Use peaked in FY2006 at about 30,000 head covered and declined in FY2007 to about 10,000 head. The number covered reflects a small portion of the annual calf crop, which ranges from 1.6 to 1.9 million head. Despite the high deductible in those earlier years, prices fell enough to trigger indemnity payments.

LRP is not without its faults. Because it is a pilot program, sales may be suspended if price risk becomes too large. The short duration (13 weeks) may limit the time during the year that cow-calf operators would find useful coverage available. The 30-day window to make cash sales may not fit if drought conditions move up marketing dates. Technically, LRP coverage can be sold to an eligible buyer of the cattle and be valued like an option.

For more information or to find an eligible agent, see the RMA website: http://www.rma.usda.gov/