Livestock Risk Protection Insurance for Stocker Operations

Tammy L. McKinley
Extension Specialist
Agricultural Economics
Acknowledgements

• Original presentation by Dr. Walt Prevatt, Auburn University

• Special thanks to Dr. Emmit Rawls and Randall Shaw of Southern AG for their many contributions to this presentation
Why Should You Care About LRP?

Let’s remember a few basics of managing feeder cattle market price risk...

• The long-run average returns are highest in the cash market
• Long-run average returns will be reduced when using any type of price protection when compared to the cash market
• Price protection allows you to protect against a catastrophic low market price event that may jeopardize your ability to continue farming
Why Should You Care About LRP?

August 2009
CME Feeder Cattle Futures Prices

Between Sep. and Dec.
-$22/cwt. or -$144/hd
Why Should You Care About LRP?

- A lot of money is at risk in the stocker enterprise:
  - Calf purchase cost (say $300 - $500 per head)
  - Grazing cost (say $50 - $150 per head)
  - Feed cost (say $50 - $150 per head)
  - Vet. & Med. cost ($10-$20 per head)
  - Overhead cost ($50 - $100 per head)
  - Labor cost ($10 - $30 per head)
  - Miscellaneous cost ($xx - $xx per head)
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  – Miscellaneous cost ($xx - $xx per head)

Let’s say, total cost is between $500 and $800 per head

If you run 60 head, that’s between $30,000 and $48,000
Why Should You Care About LRP?

- A lot of money is at risk in the stocker enterprise:
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  - Feed cost (say $50–$150 per head)
  - Vet. & Med. cost ($10–$20 per head)
  - Overhead cost ($50–$100 per head)
  - Labor cost ($10–$30 per head)
  - Miscellaneous cost ($xx–$xx per head)

Let’s say, total cost is between $500 and $800 per head.

If you run 60 head, that’s between $30,000 and $48,000.

You can buy a pickup for that amount of money!
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A lot of money is at risk in the stocker enterprise:

- Calf purchase cost (say $300 - $500 per head)
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- Miscellaneous cost ($xx - $xx per head)

Let’s say, total cost is between $500 and $800 per head

If you run 60 head, that’s between $30,000 and $48,000

You can buy a pickup for that amount of money!

Do you think you might buy insurance on the pickup??
What Is LRP Insurance?

LRP (Livestock Risk Protection) insurance for feeder cattle is a “single peril insurance policy” intended to provide protection against a *price decrease*. 
What Does LRP Insurance Not Do?

LRP does **NOT** protect against

depth
disease
quarantine
etc.

LRP is **NOT** designed to enhance profit!
What Is LRP Insurance?

LRP (Livestock Risk Protection) insurance for feeder cattle is a “single peril insurance policy” intended to provide protection against a catastrophic price decrease.
Where Is LRP Available?

LRP is available in 37 states
## What are the Basics of LRP?

<table>
<thead>
<tr>
<th>Item</th>
<th>LRP–Feeder Cattle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of cattle</td>
<td>Heifers, Steers, Brahman, or Dairy</td>
</tr>
<tr>
<td>Weight Classification</td>
<td>Less than 600 Lbs.</td>
</tr>
<tr>
<td></td>
<td>600 - 900 Lbs.</td>
</tr>
<tr>
<td>Coverage Levels</td>
<td>70-100%</td>
</tr>
<tr>
<td>Coverage Price</td>
<td>Varies Daily</td>
</tr>
<tr>
<td>Endorsement Length</td>
<td>13 weeks to 52 weeks</td>
</tr>
<tr>
<td></td>
<td>(4 week intervals)</td>
</tr>
<tr>
<td>Subsidy</td>
<td>13 Percent</td>
</tr>
<tr>
<td>Ending Value Based On....</td>
<td>CME Feeder Cattle Price Index</td>
</tr>
<tr>
<td>Max. Cattle Covered Per Submission</td>
<td>1,000 Head</td>
</tr>
<tr>
<td>Max. Cattle Covered Per Crop Year</td>
<td>2,000 Head</td>
</tr>
</tbody>
</table>
What are the Basics of LRP?

<table>
<thead>
<tr>
<th>Item</th>
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<th>LRP-Fed Cattle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of cattle</td>
<td>Heifers, Steers, Brahman, or Dairy</td>
<td>Heifers or Steers</td>
</tr>
<tr>
<td>Weight Classification</td>
<td>Less than 600 Lbs.  600 - 900 Lbs.</td>
<td>10 – 14 Cwt. Yield Grade 1- 3</td>
</tr>
<tr>
<td>Coverage Levels</td>
<td>70-100%</td>
<td>70-100%</td>
</tr>
<tr>
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<td>AMS 5-area weekly average direct slaughter cattle report</td>
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<td>2,000 Head</td>
</tr>
<tr>
<td>Max. Cattle Covered Per Crop Year</td>
<td>2,000 Head</td>
<td>4,000 Head</td>
</tr>
</tbody>
</table>
• All livestock owners may use LRP
• Livestock to be covered must be in state offering LRP insurance
• Available through Crop Insurance Agent System
• Must submit application to participate prior to purchasing LRP Insurance
• Coverage prices may be selected between 3:30 p.m. and 9:00 a.m. Central Time (after and before trading on CME)
More Details

• Payment of premium must be made when you purchase the LRP insurance

• Price adjustment factors based on sex, breed and weight are applied to expected and actual ending values

• The actual ending value on date coverage ends is the CME Feeder Cattle Index multiplied by appropriate price adjustment factor
**Price Adjustment Factors (PAF)**

<table>
<thead>
<tr>
<th>End Weight</th>
<th>Steers Weight 1</th>
<th>Heifers Weight 1</th>
<th>Brahman Weight 1</th>
<th>Dairy Weight 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 600 Lbs.</td>
<td>110%</td>
<td>100%</td>
<td>100%</td>
<td>85%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>End Weight</th>
<th>Steers Weight 2</th>
<th>Heifers Weight 2</th>
<th>Brahman Weight 2</th>
<th>Dairy Weight 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>600-900 Lbs.</td>
<td>100%</td>
<td>90%</td>
<td>90%</td>
<td>80%</td>
</tr>
</tbody>
</table>
What are the Steps to Use LRP?

• Contact your local crop insurance agent who sells LRP insurance
• Submit an application
• Select the type and weight of feeder cattle to insure
• Select an endorsement length
• Select the coverage level
What are the Steps to Use LRP?

• The insurance agent submits a Specific Coverage Endorsement (SCE) to RMA on-line for you between 3:30 p.m. and 9:00 a.m. Central Time
  – The premium is due immediately – not later

• A return notification will be sent acknowledging that your SCE has been received and accepted

• After the policy end date, submit an indemnity claim if warranted
  – When covered price is more than actual ending value
How Does LRP Insurance Work?

Let’s Do the Math
LRP – Feeder Cattle Example

• Assume today’s date is August 4, 2010.

• A stocker operator in S.W. Virginia plans to market 60 head of BWF feeder steers weighing 800 lbs the week of March 2, 2011 (30 weeks).

• The stocker operator is concerned that feeder cattle prices may decrease.

• He contacts his local crop insurance agent to evaluate the LRP-Feeder Cattle Insurance policy.
# Calculation of Insured Value

You select the coverage price using the LRP report that adjusts for type and weight of feeders, endorsement length and coverage level (70-100%).

<table>
<thead>
<tr>
<th>Number of Head (whole number)</th>
<th>Target Weight At End Date (cwt. per head)</th>
<th>Coverage Price (as shown on Actuarial Document)</th>
<th>Insured Share (x.xxx)</th>
<th>=</th>
<th>Insured Value (Dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>x</td>
<td>8.00</td>
<td>x</td>
<td>x</td>
<td>=</td>
</tr>
</tbody>
</table>

You select the coverage price using the LRP report that adjusts for type and weight of feeders, endorsement length and coverage level (70-100%).
### USDA subsidizes 13 percent of total LRP premium

* See notes at bottom of page

<table>
<thead>
<tr>
<th>State</th>
<th>County</th>
<th>Endorsement Length</th>
<th>Commodity</th>
<th>Type</th>
<th>Practice</th>
<th>Crop Year</th>
<th>Exp. End Value</th>
<th>Coverage Price</th>
<th>Coverage Level</th>
<th>Rate</th>
<th>Cost Per CWT</th>
<th>End Date</th>
<th>Actual End Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>10</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.024</td>
<td>$111.000</td>
<td>0.074100</td>
<td>0.022304</td>
<td>2.567</td>
<td>11/03/2010</td>
<td></td>
</tr>
<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>13</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.924</td>
<td>$109.950</td>
<td>0.956700</td>
<td>0.017126</td>
<td>1.833</td>
<td>11/03/2010</td>
<td></td>
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<td>51 VIRGINIA</td>
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<td>13</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.924</td>
<td>$107.950</td>
<td>0.939300</td>
<td>0.012032</td>
<td>1.369</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>17</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.554</td>
<td>$122.830</td>
<td>0.986500</td>
<td>0.028140</td>
<td>3.175</td>
<td>12/01/2010</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>17</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.554</td>
<td>$116.830</td>
<td>0.967500</td>
<td>0.021682</td>
<td>2.403</td>
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<td>990 ALL COUNTIES</td>
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<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.554</td>
<td>$106.830</td>
<td>0.950000</td>
<td>0.016420</td>
<td>1.767</td>
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<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>114.554</td>
<td>$98.830</td>
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<td>0.005656</td>
<td>0.559</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>21</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>113.940</td>
<td>$112.220</td>
<td>0.984900</td>
<td>0.031091</td>
<td>3.489</td>
<td>12/29/2010</td>
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</tr>
<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>21</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>113.940</td>
<td>$116.220</td>
<td>0.967400</td>
<td>0.024737</td>
<td>2.732</td>
<td>12/29/2010</td>
<td></td>
</tr>
<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>21</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>113.940</td>
<td>$106.220</td>
<td>0.949800</td>
<td>0.019450</td>
<td>2.106</td>
<td>12/29/2010</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>21</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>113.940</td>
<td>$86.220</td>
<td>0.862000</td>
<td>0.007972</td>
<td>0.783</td>
<td>12/29/2010</td>
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</tr>
<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>26</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>113.436</td>
<td>$107.000</td>
<td>0.943600</td>
<td>0.021838</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>30</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>112.631</td>
<td>$106.280</td>
<td>0.943200</td>
<td>0.024432</td>
<td>2.602</td>
<td>03/02/2011</td>
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<tr>
<td>51 VIRGINIA</td>
<td>990 ALL COUNTIES</td>
<td>34</td>
<td>0801 FEEDER CATTLE</td>
<td>810 STEERS WEIGHT 2</td>
<td>997 NO PRACTICE SPECIFIED</td>
<td>2011</td>
<td>112.400</td>
<td>$106.000</td>
<td>0.943100</td>
<td>0.025472</td>
<td>2.700</td>
<td>03/30/2011</td>
<td></td>
</tr>
</tbody>
</table>
# Calculation of Insured Value

<table>
<thead>
<tr>
<th>Number of Head (whole number)</th>
<th>x</th>
<th>Target Weight At End Date (cwt. per head)</th>
<th>x</th>
<th>Coverage Price (as shown on Actuarial Document)</th>
<th>x</th>
<th>Insured Share (x.xxx)</th>
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</thead>
<tbody>
<tr>
<td>60</td>
<td>x</td>
<td>8.00</td>
<td>x</td>
<td>106.28</td>
<td>x</td>
<td>1.000</td>
<td>=</td>
<td>51,014</td>
</tr>
</tbody>
</table>
Calculation of Premium

<table>
<thead>
<tr>
<th>Insured Value (Dollar)</th>
<th>x</th>
<th>Rate (xxxxxx)</th>
<th>=</th>
<th>Rounded Total Premium (Dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>51,014</td>
<td>x</td>
<td>.024482</td>
<td>=</td>
<td>1,249</td>
</tr>
</tbody>
</table>
Calculation of Premium Subsidy

<table>
<thead>
<tr>
<th>Rounded Total Premium (Dollar)</th>
<th>x</th>
<th>Subsidy (Percent)</th>
<th>=</th>
<th>Rounded Subsidy (Dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,249</td>
<td>x</td>
<td>0.13</td>
<td>=</td>
<td>162</td>
</tr>
</tbody>
</table>
### Calculation of Producer Premium

<table>
<thead>
<tr>
<th>Rounded Total Premium (Dollar)</th>
<th>Rounded Subsidy (Dollar)</th>
<th>=</th>
<th>Producer Premium (Dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,249</td>
<td>-</td>
<td>=</td>
<td>1,087</td>
</tr>
</tbody>
</table>

$1,087 / 60\text{ head} = $18.12 / \text{head}$
## Calculation of Producer Premium

<table>
<thead>
<tr>
<th>Rounded Total Premium (Dollar)</th>
<th>-</th>
<th>Rounded Subsidy (Dollar)</th>
<th>=</th>
<th>Producer Premium (Dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,249</td>
<td>-</td>
<td>162</td>
<td>=</td>
<td>1,087</td>
</tr>
</tbody>
</table>

You pay $1,087 to insure you receive a minimum of $51,014.
Reminder

Feeder cattle prices move in _one_ of two directions!

Let’s assume feeder cattle prices _INCREASE_
Calculation of Indemnity Payment

CME Feeder Cattle Index *Increases* Above Coverage Price

<table>
<thead>
<tr>
<th>Item</th>
<th>Insured Value (dollar)</th>
<th>Actual Ending Value (dollar)</th>
<th>Indemnity Payment (dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars Per Cwt.</td>
<td>$106.28</td>
<td>CME FC Index*PAF $115</td>
<td>$0</td>
</tr>
<tr>
<td>Dollars Per Head</td>
<td>$850.24</td>
<td>$920.00</td>
<td>$0</td>
</tr>
<tr>
<td>Total Dollars</td>
<td>$51,014.40</td>
<td>$55,200</td>
<td>$0</td>
</tr>
</tbody>
</table>
Reminder

Feeder cattle prices move in *one* of two directions!

Let’s assume feeder cattle prices *DECREASE*
# Calculation of Indemnity Payment

## CME Feeder Cattle Index _Decreases_ Below Coverage Price

<table>
<thead>
<tr>
<th>Item</th>
<th>Insured Value (dollar)</th>
<th>Actual Ending Value (dollar)</th>
<th>= Indemnity Payment (dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dollars Per Cwt.</td>
<td>$106.28</td>
<td>CME FC Index*PAF $100</td>
<td>= $6.28</td>
</tr>
<tr>
<td>Dollars Per Head</td>
<td>$850.24</td>
<td>$800.00</td>
<td>= $50.24</td>
</tr>
<tr>
<td>Total Dollars</td>
<td>$51,014.40</td>
<td>$48,000</td>
<td>= $3,014.40</td>
</tr>
</tbody>
</table>
Net returns on average were $6.50 per head less than when compared with no price protection in the cash market over the 20 year period.

Caleb Bott and Dillion Fuez, Utah State University, May 2010
http://cattlemarketanalysis.org/current.html
LRP for Feeder Cattle

**Advantages**
- Easy to acquire
- Premiums are subsidized
- Safe to use
- Available in 37 states
- Can insure a specific number of cattle (1 hd. up to a trkload)
- Can insure up to 1,000 feeder cattle per submission, not to exceed 2,000 per crop year (July 1 – June 30)
- No broker fees
- No margin calls
- Lenders can take a security interest in the contract

**Disadvantages**
- Cannot offset policy
- Cannot convert coverage (such as buy two puts or fence a price)
- Limited coverage for distant time periods
- Can only obtain price protection at below expected end value
- Selling cattle more than 30 days prior to the end of the policy may void the policy
- **Basis risk**
- Suspension of Sales by USDA
Does LRP Fit Your Operation?

• The best way to determine if LRP fits your operation is to sit down with *your crop insurance agent*

• Your agent needs to be LRP trained/approved

• Go through your individual situation

• Your agent can provide you with specific information tailored to your farm business
What are the Steps to Use LRP?

• Contact your local crop insurance agent who sells LRP insurance
• Submit an application
• Select the type and weight of feeder cattle to insure
• Select an endorsement length
• Select the coverage level
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<table>
<thead>
<tr>
<th>Useful LRP Websites</th>
<th></th>
</tr>
</thead>
</table>
  *(View between 3:30 PM and 9 AM Central Time)*         |
  *(View between 3:30 PM and 9 AM Central Time)*         |
| **LRP study guide**                                    | [http://livestockinsurance.unl.edu/index.html](http://livestockinsurance.unl.edu/index.html) |
Other Price Risk Management Tools for Stocker Operators

- Short Hedge
- Buy a Put Option
- Roll-up Put Options
  - Buy 2 Put Options
- Synthetic Put
  - Short Hedge & Buy a Call
- Fence
  - Buy a Call & Sell a Call
- Forward Contract
Additional Reference Contacts

• Emmit Rawls, University of Tennessee
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