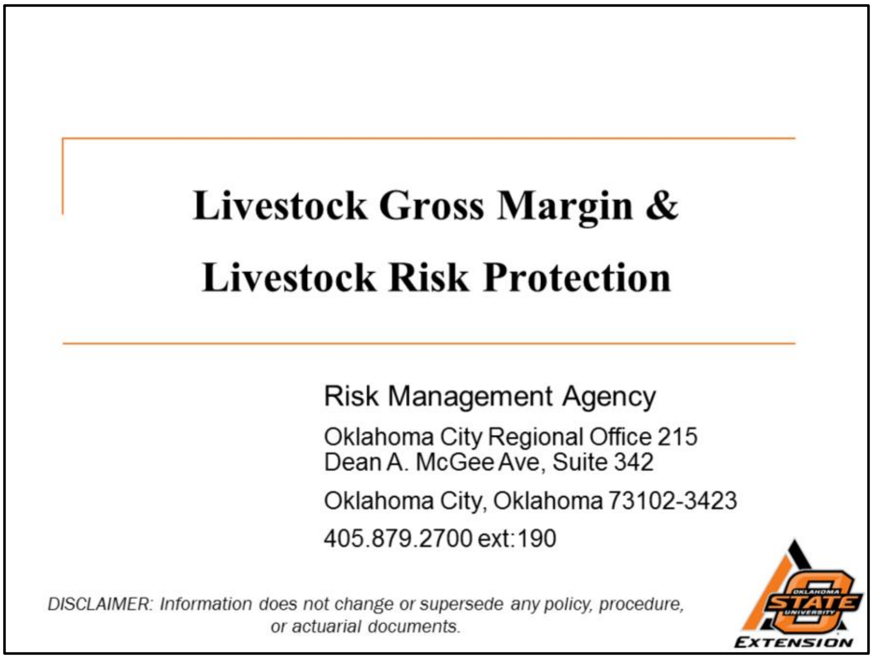

Livestock Gross Margin & Livestock Risk Protection

Risk Management Agency

Oklahoma City Regional Office 215
Dean A. McGee Ave, Suite 342

Oklahoma City, Oklahoma 73102-3423

405.879.2700 ext:190

DISCLAIMER: Information does not change or supersede any policy, procedure, or actuarial documents.

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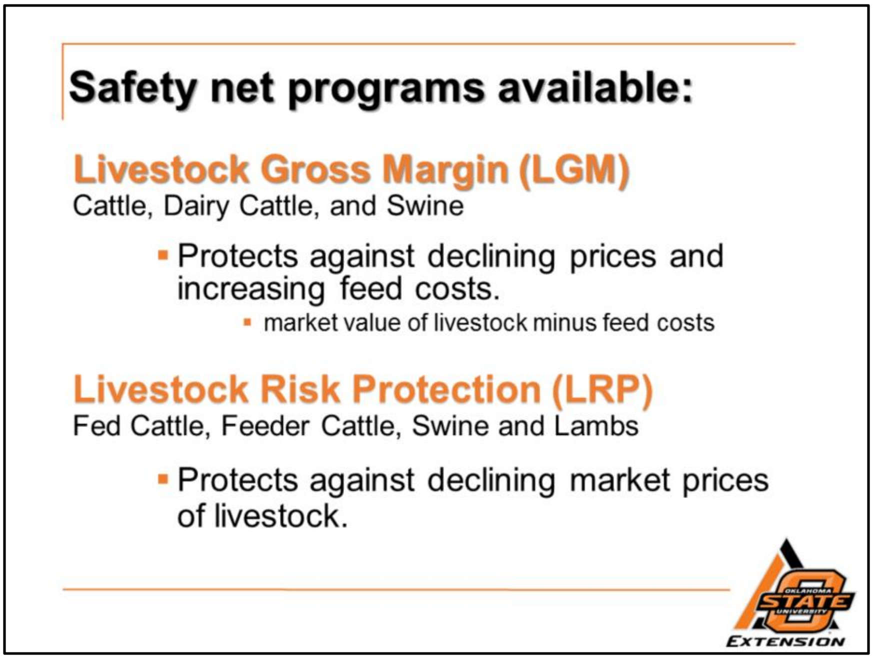


Safety net programs available:

Livestock Gross Margin (LGM)

Cattle, Dairy Cattle, and Swine

- Protects against declining prices and increasing feed costs.
  - market value of livestock minus feed costs

Livestock Risk Protection (LRP)

Fed Cattle, Feeder Cattle, Swine and Lambs

- Protects against declining market prices of livestock.

EXTENSION

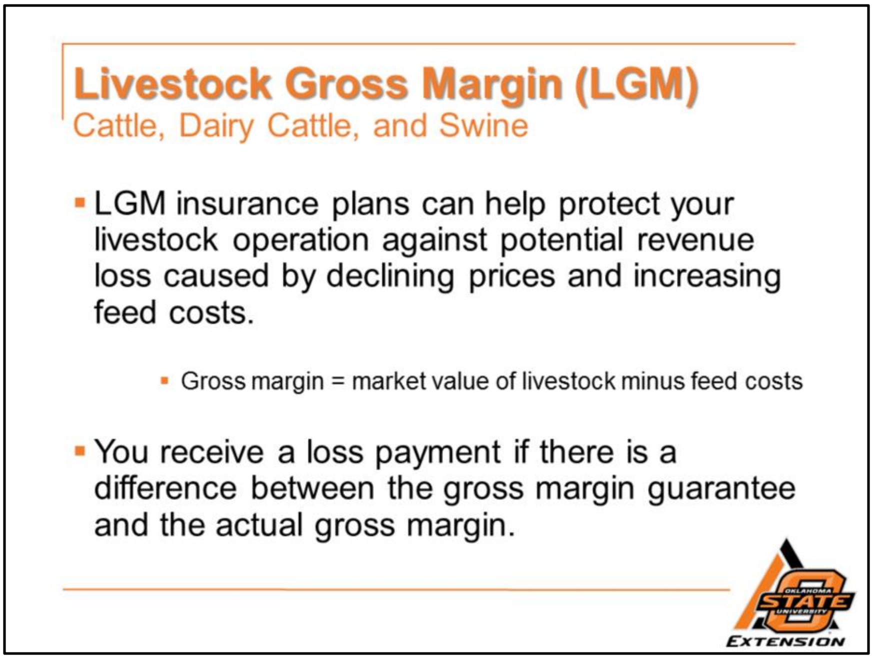
The Risk Management Agency (RMA) has two products that can help producers manage their financial risk as it pertains to livestock.

The Livestock Gross Margin program (LGM) takes into account two variables: livestock prices and feed costs. The Livestock Risk Protection program (LRP) program takes into account one variable, market prices.

Each program has different attributes and it is important for producers to understand the differences in order to make the right decision when trying to decide how to best manage risk.

While producers can lock in prices through the futures market, using the futures market requires a contract for a sizable number of animals or pounds. Both LRP and LGM offer price protection on any number of animals.

It is important to note that while these programs cover producers from falling livestock prices, rising feed costs or both - neither of these programs protect producers against disease or death losses.



Livestock Gross Margin (LGM)

Cattle, Dairy Cattle, and Swine

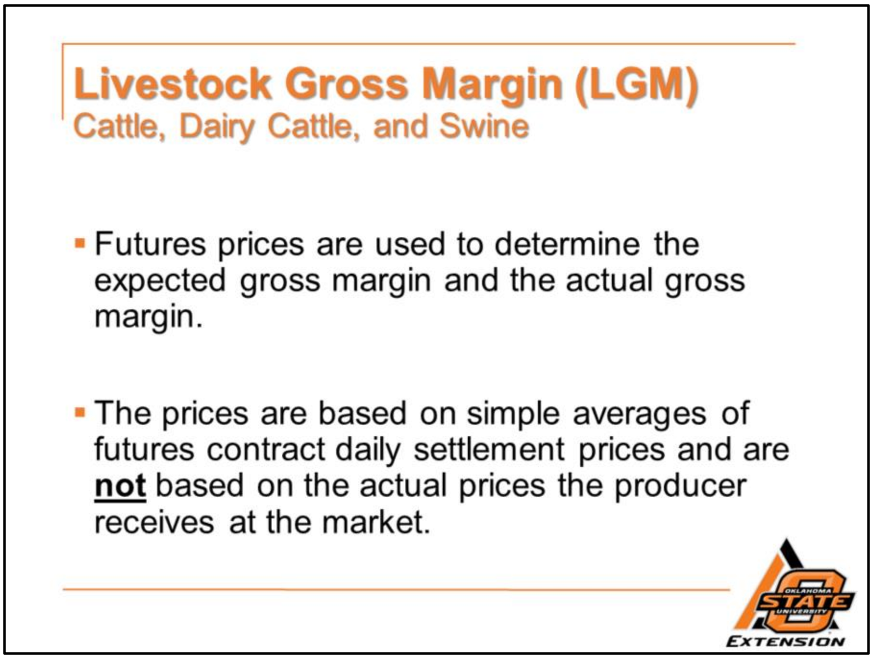
- LGM insurance plans can help protect your livestock operation against potential revenue loss caused by declining prices and increasing feed costs.
  - Gross margin = market value of livestock minus feed costs
- You receive a loss payment if there is a difference between the gross margin guarantee and the actual gross margin.

LGM can be purchased for cattle, dairy cattle and swine.

As stated in the previous slide LGM is based on two variables, the market value of the livestock and feed costs.

The formula to remember for this program is: Gross Margin equals the market value of the livestock minus feed costs.

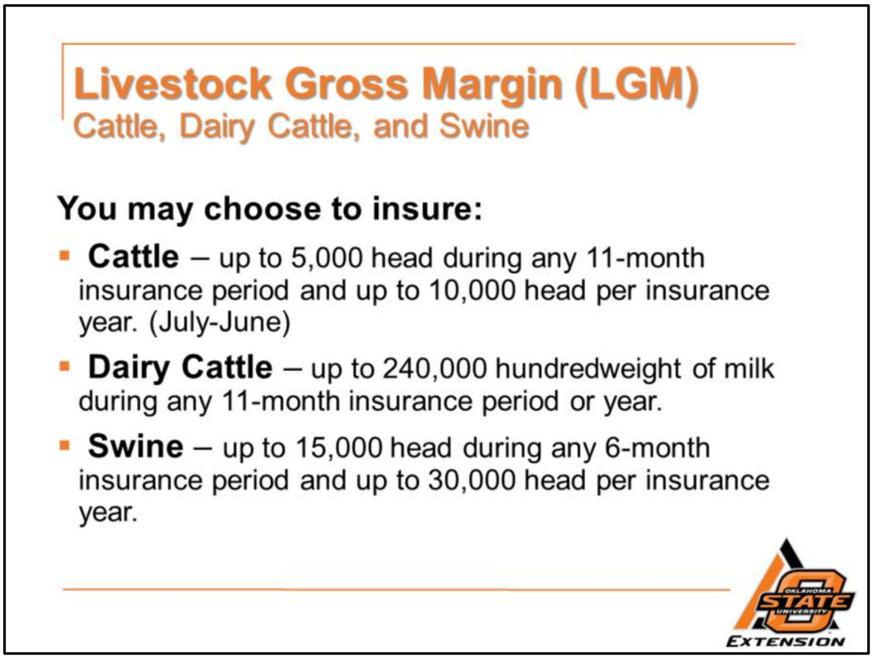
Producers receive a loss payment if there is a difference between the gross margin guarantee that is established at the time of purchasing the insurance and the actual gross margin.



Livestock Gross Margin (LGM)
Cattle, Dairy Cattle, and Swine

- Futures prices are used to determine the expected gross margin and the actual gross margin.
- The prices are based on simple averages of futures contract daily settlement prices and are **not** based on the actual prices the producer receives at the market.

Futures prices are used to determine the expected gross margin and the actual gross margin - prices are based on simple averages of futures contract daily settlement prices and are NOT based on the actual price a producer may receive at a local market.



Livestock Gross Margin (LGM)

Cattle, Dairy Cattle, and Swine

You may choose to insure:

- **Cattle** – up to 5,000 head during any 11-month insurance period and up to 10,000 head per insurance year. (July-June)
- **Dairy Cattle** – up to 240,000 hundredweight of milk during any 11-month insurance period or year.
- **Swine** – up to 15,000 head during any 6-month insurance period and up to 30,000 head per insurance year.

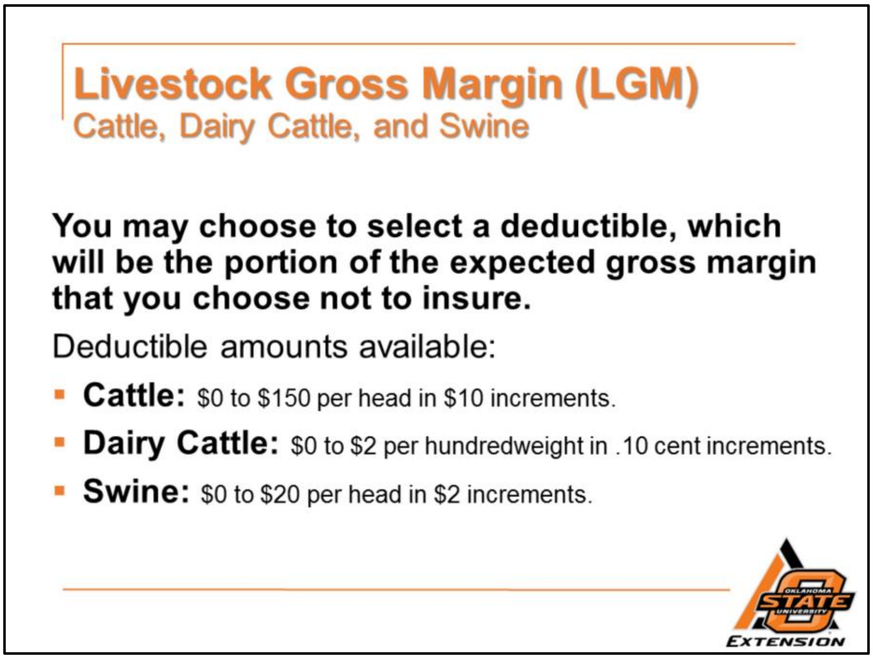
Extension

Producers can tailor LGM to insure the number of head, or in the case of dairy, the hundredweight of milk, to match the actual size of their operation with certain limits:

For cattle, producers can insure up to 5,000 head during any 11 month insurance period and up to 10,000 head per insurance year (July-June)

For dairy cattle, producers can insure up to 240,000 hundredweight of milk during any 11 month insurance period or year.

For swine, producers can insure up to 15,000 head during any 6-month insurance period and up to 30,000 head per insurance year.



Livestock Gross Margin (LGM)

Cattle, Dairy Cattle, and Swine

You may choose to select a deductible, which will be the portion of the expected gross margin that you choose not to insure.

Deductible amounts available:

- **Cattle:** $0 to $150 per head in $10 increments.
- **Dairy Cattle:** $0 to $2 per hundredweight in .10 cent increments.
- **Swine:** $0 to $20 per head in $2 increments.

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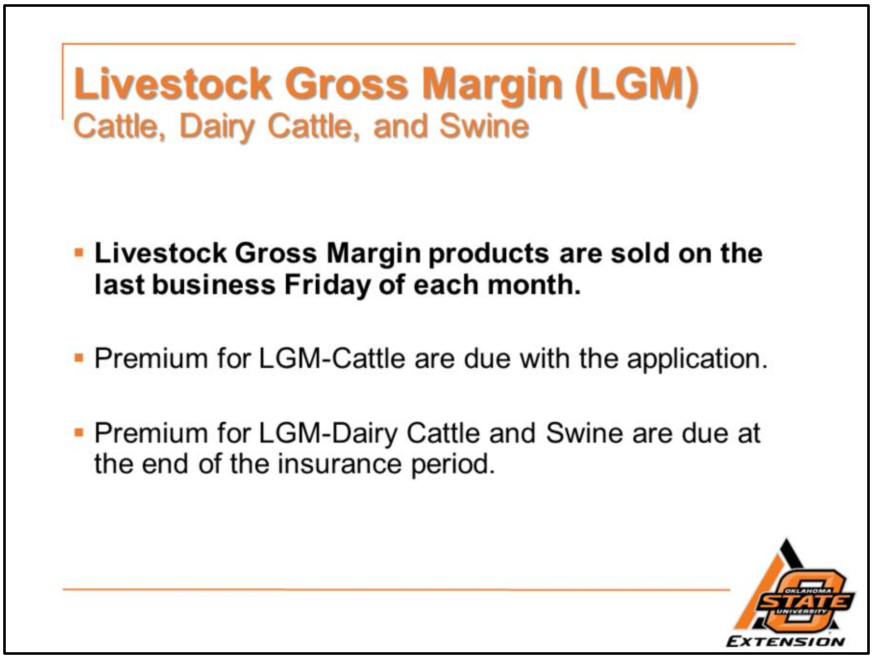
As with any insurance product, a producer needs to consider what deductible is most appropriate for their own situation.

The deductible is the portion of the expected gross margin a producer will **not** insure.

Deductible amounts that can be selected for Cattle is $0 to $150/head in $10 increments.

Deductible amounts for dairy cattle can be selected between $0 to $2 per hundred weight in .10 cent increments.

For Swine a deductible can be selected from $0 to $20 per head in $2 increments.



Livestock Gross Margin (LGM)

Cattle, Dairy Cattle, and Swine

- **Livestock Gross Margin products are sold on the last business Friday of each month.**
- Premium for LGM-Cattle are due with the application.
- Premium for LGM-Dairy Cattle and Swine are due at the end of the insurance period.

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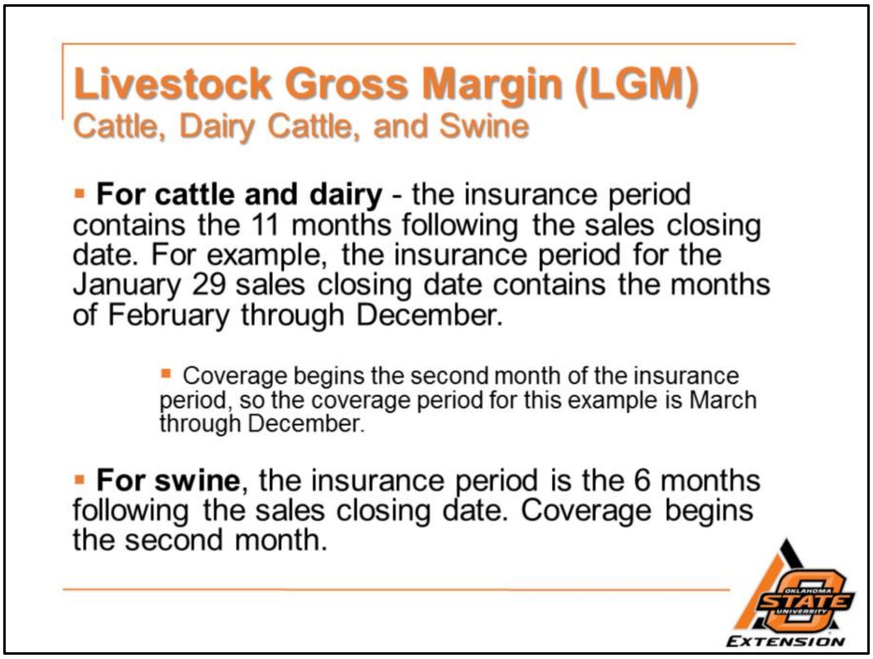
LGM products are sold on the last business Friday of each month.

For LGM cattle the premium is due with the application, for LGM Dairy Cattle and Swine the premium is due at the end of the insurance period.



Livestock Gross Margin (LGM)

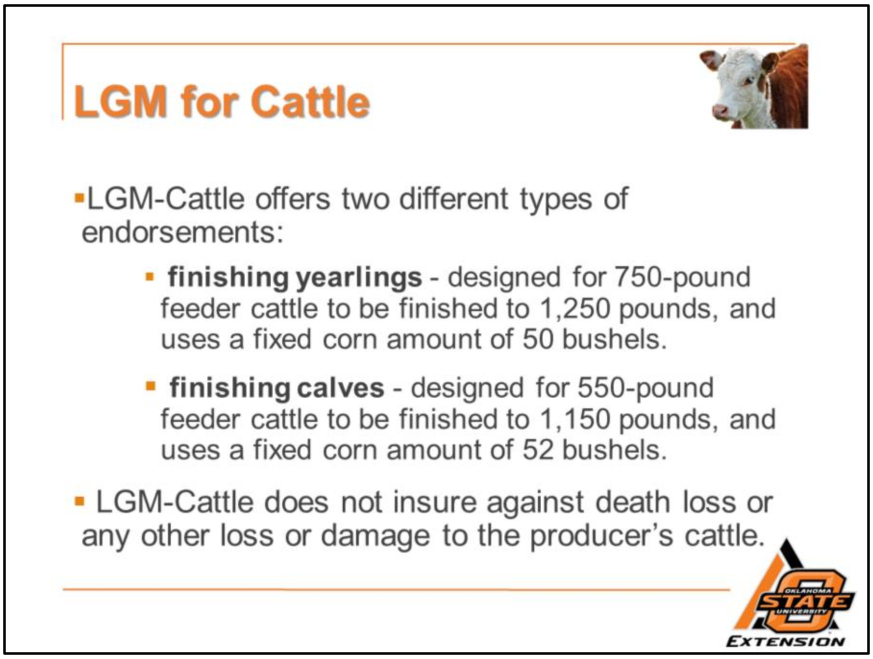
Cattle, Dairy Cattle, and Swine

- **For cattle and dairy** - the insurance period contains the 11 months following the sales closing date. For example, the insurance period for the January 29 sales closing date contains the months of February through December.
    - Coverage begins the second month of the insurance period, so the coverage period for this example is March through December.
- **For swine**, the insurance period is the 6 months following the sales closing date. Coverage begins the second month.

An important component for producers to understand when considering LGM is the insurance period. For cattle and dairy the insurance period includes the 11 months following the sales closing date.

For example: the insurance period for the January 29th sales closing date contains the months of February through December – with the **coverage** beginning the second month of the insurance period. In this example coverage would be March through December.

For swine the insurance period is the six months following the sales closing date, with coverage beginning the second month.



LGM for Cattle

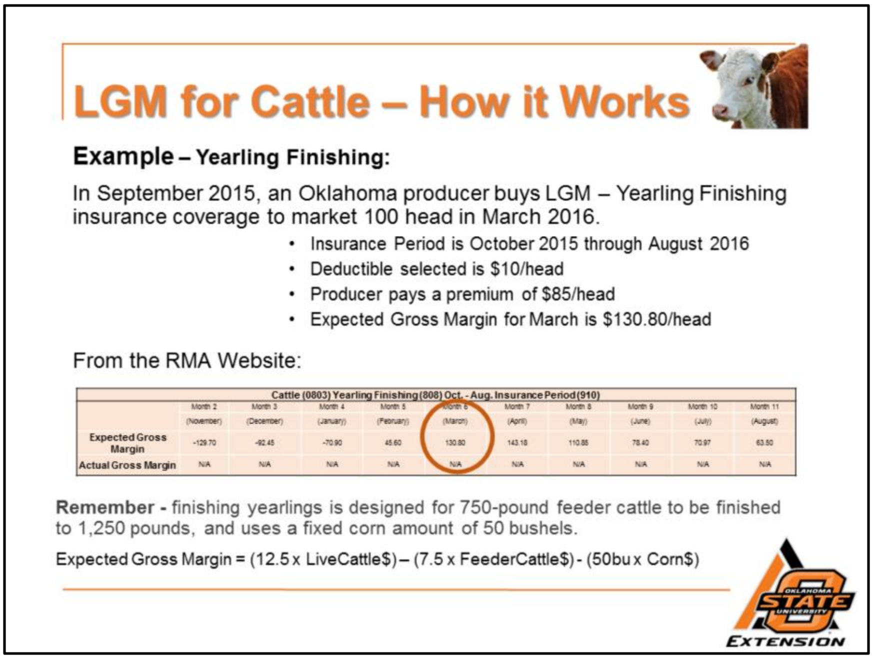
- LGM-Cattle offers two different types of endorsements:
  - **finishing yearlings** - designed for 750-pound feeder cattle to be finished to 1,250 pounds, and uses a fixed corn amount of 50 bushels.
  - **finishing calves** - designed for 550-pound feeder cattle to be finished to 1,150 pounds, and uses a fixed corn amount of 52 bushels.
- LGM-Cattle does not insure against death loss or any other loss or damage to the producer's cattle.

Cattle producers need to be aware that there are two different types of LGM endorsements and their selection should be based on the type of cattle included in their own operation.

One endorsement is finishing yearlings – this endorsement is designed for 750 pound feeder cattle to be finished to 1250 pounds and uses a fixed corn amount of 50 bushels.

The other endorsement is finishing calves – this endorsement is designed for 550 pound feeder cattle to be finished to 1150 pounds and uses a fixed corn amount of 52 bushels.

Again producers should remember LGM cattle does not insure against death loss or any other loss or damage to the producers cattle.



LGM for Cattle – How it Works

Example – **Yearling Finishing:**

In September 2015, an Oklahoma producer buys LGM – Yearling Finishing insurance coverage to market 100 head in March 2016.

- Insurance Period is October 2015 through August 2016
- Deductible selected is $10/head
- Producer pays a premium of $85/head
- Expected Gross Margin for March is $130.80/head

From the RMA Website:

Cattle (0803) Yearling Finishing (808) Oct. - Aug. Insurance Period (910)										
	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Month 10	Month 11
	(November)	(December)	(January)	(February)	(March)	(April)	(May)	(June)	(July)	(August)
Expected Gross Margin	-129.70	-92.45	-70.90	45.60	130.80	143.18	110.88	78.40	70.97	63.50
Actual Gross Margin	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remember - finishing yearlings is designed for 750-pound feeder cattle to be finished to 1,250 pounds, and uses a fixed corn amount of 50 bushels.

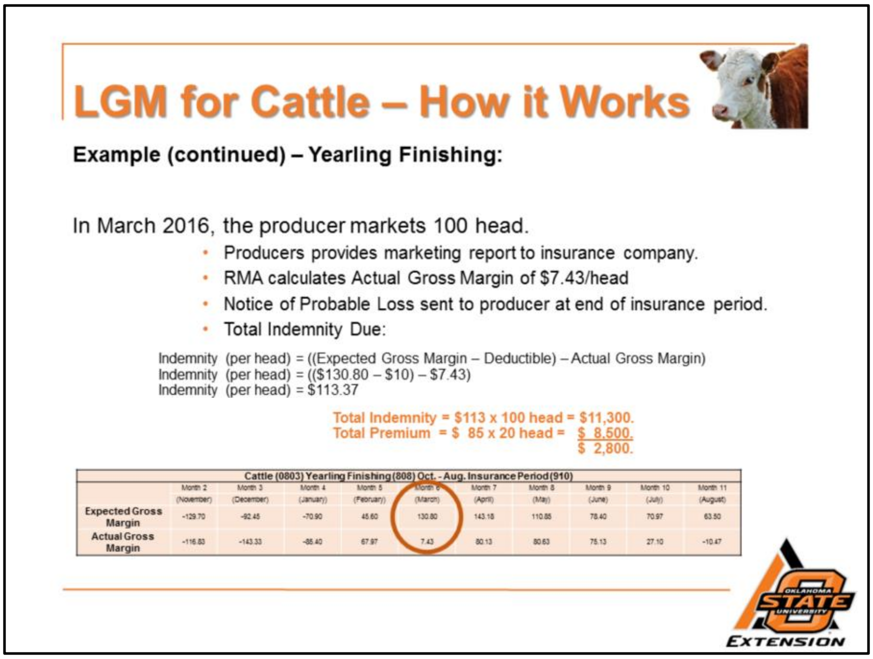
Expected Gross Margin = (12.5 x LiveCattle$) – (7.5 x FeederCattle$) - (50bu x Corn$)

Walking through an example can help producers have a better understanding of how the program works. In this example the producer is looking at the yearling finishing endorsement, which is designed for 750 pound feeder cattle to be finished to 1250 pounds and uses a fixed corn amount of 50 bushels.

This producer purchases a LGM policy September of 2015 and wants to provide coverage for 100 head that will be marketed in March of 2016.

In this situation the insurance period begins October 2015 and goes through August 2016, with coverage beginning in November 2015. The producer selected a $10/head deductible and pays a premium of $85/head. The expected gross margin is based on the futures market and can be found on the RMA website. In this case the expected gross margin is $130.80/head.

While the RMA website does the calculation for the producer it is important the producer understand what is included in the calculation. The formula for the calculation can be seen at the bottom of the slide: Expected Gross Margin equals 12.5 (with the 12.5 representing the finished weight of 1250 pounds) times the futures price of Live Cattle minus 7.5(with 7.5 representing 750 pound beginning weight) times the futures price of feeder cattle minus 50 bushel corn times the futures corn price.



LGM for Cattle – How it Works

Example (continued) – Yearling Finishing:

In March 2016, the producer markets 100 head.

- Producers provides marketing report to insurance company.
- RMA calculates Actual Gross Margin of $7.43/head
- Notice of Probable Loss sent to producer at end of insurance period.
- Total Indemnity Due:

Indemnity (per head) = ((Expected Gross Margin – Deductible) – Actual Gross Margin)
Indemnity (per head) = (($130.80 – $10) – $7.43)
Indemnity (per head) = $113.37

Total Indemnity = $113 x 100 head = $11,300.
Total Premium = $ 85 x 20 head = $ 8,500.
$ 2,800.

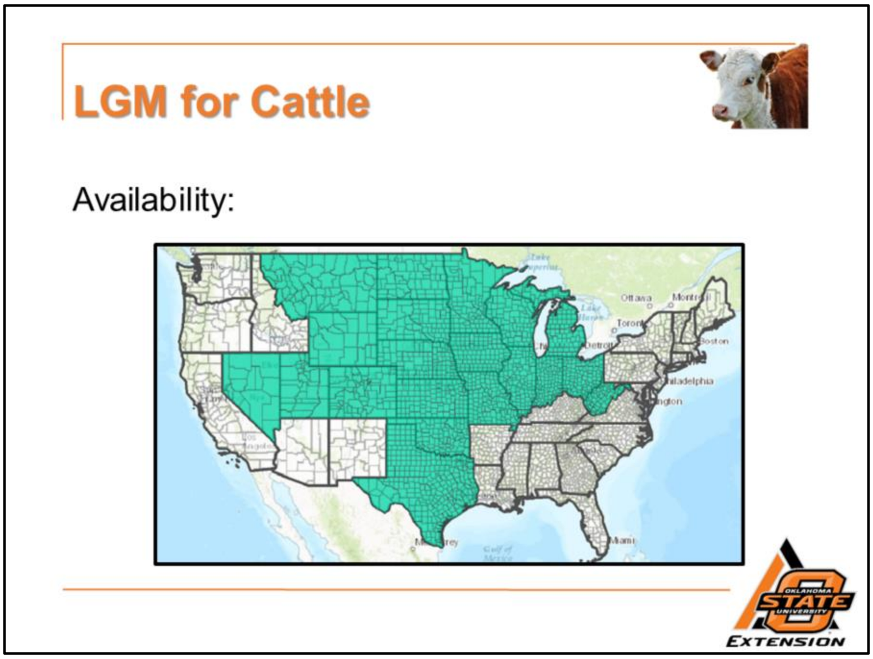
Cattle (0803) Yearling Finishing (808) Oct. - Aug. Insurance Period (910)

	Month 2 (November)	Month 3 (December)	Month 4 (January)	Month 5 (February)	Month 6 (March)	Month 7 (April)	Month 8 (May)	Month 9 (June)	Month 10 (July)	Month 11 (August)
Expected Gross Margin	-129.70	-92.45	-70.90	45.60	130.80	143.18	110.85	78.40	70.97	63.50
Actual Gross Margin	-116.83	-143.33	-85.40	67.97	7.43	80.13	80.63	75.13	27.10	-10.47

Moving forward with the same example in March the producer markets 100 head. The producer will provide a marketing report to the insurance company. At that time RMA will calculate the actual gross margin, which is posted on the RMA website. In this situation the actual gross margin is calculated at $7.43/head and the producer will be entitled to an indemnity calculated as shown below:

Indemnity/head equals the expected Gross Margin of $130.80 minus the deductible selected by the producer of $10 minus the actual gross margin of $7.43, totaling an indemnity of $113.37 per head.

Of course when producers are calculating their risk the cost of the premium must be considered. In this example the producer had 100 head and will receive an indemnity of $11,300. However the cost of the premium was $85/head for a total of $8500 leaving a net gain of $2,800 or $28/head.

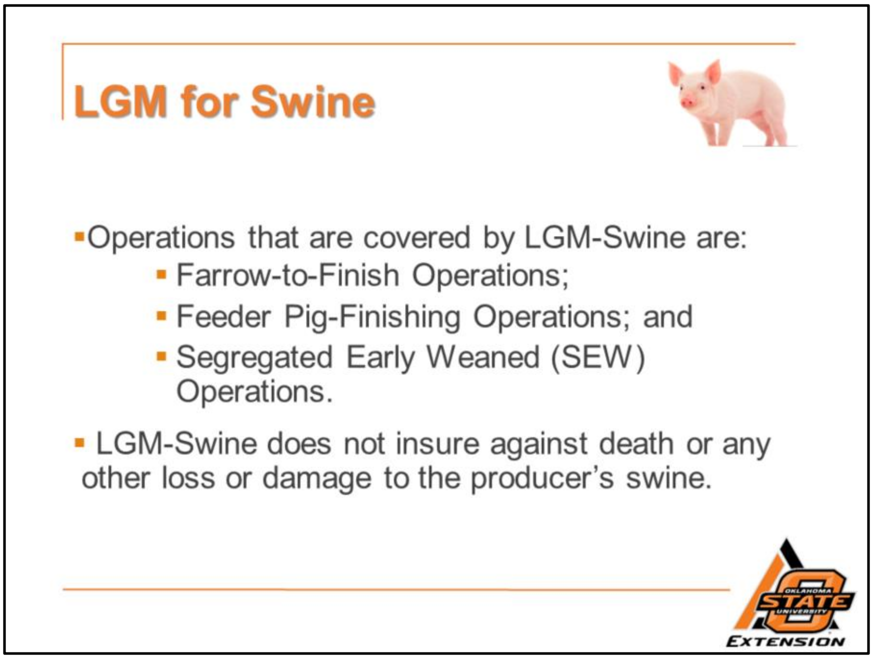


LGM for Cattle

Availability:

Ottawa
Montreal
Toronto
Detroit
Boston
Philadelphia
Miami

LGM is available to producers in the areas of the country shown in green.



LGM for Swine

- Operations that are covered by LGM-Swine are:
  - Farrow-to-Finish Operations;
  - Feeder Pig-Finishing Operations; and
  - Segregated Early Weaned (SEW) Operations.
- LGM-Swine does not insure against death or any other loss or damage to the producer's swine.

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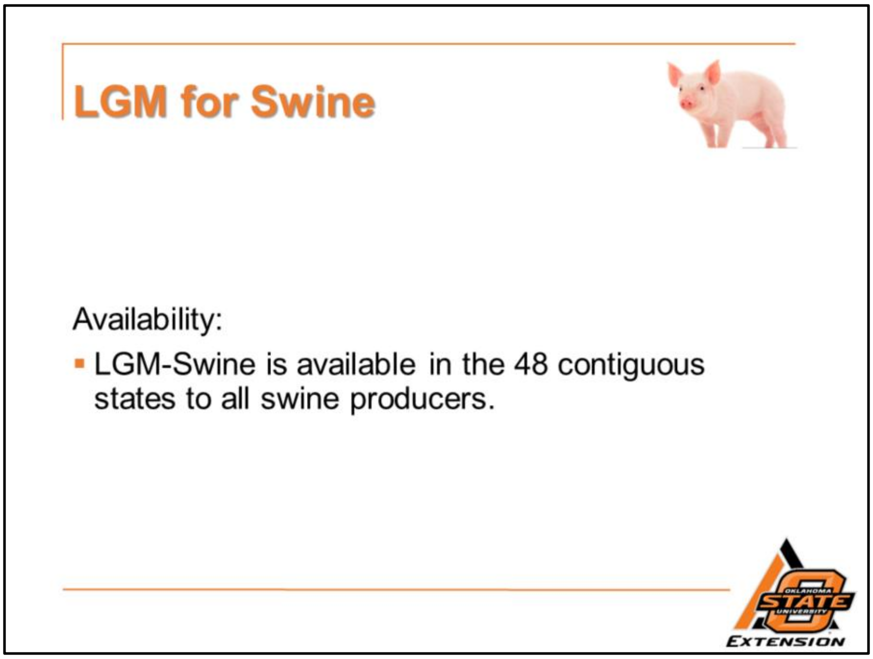
Operations that are covered by LGM-Swine are farrow to finish operations, feeder pig finishing operations and segregated early weaned (SEW) operations.

Again, LGM for swine does not insure against death or any other loss or damage to the producers swine.

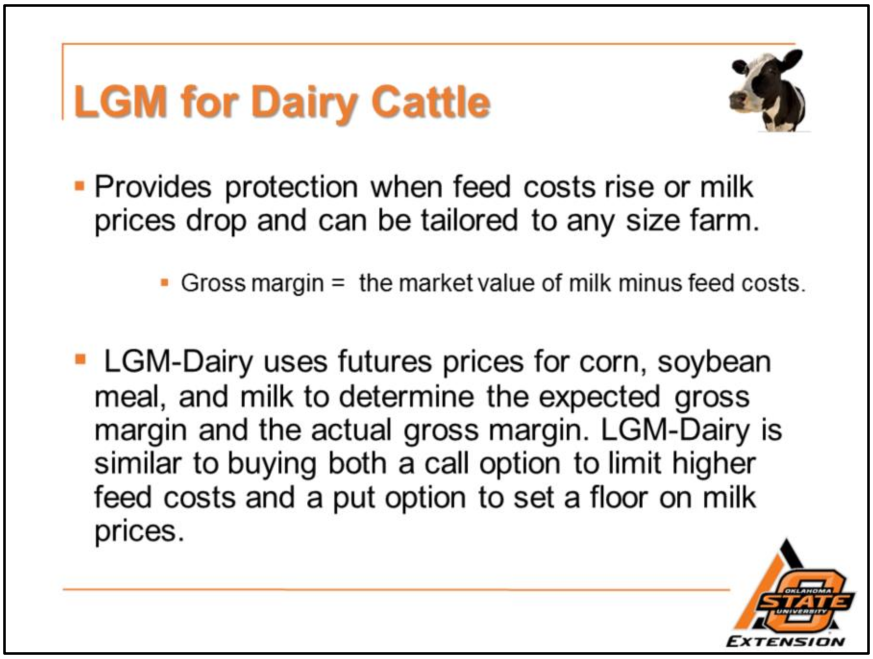


LGM for Swine

Availability:

- LGM-Swine is available in the 48 contiguous states to all swine producers.

LGM for swine is available in the 48 contiguous state to all swine producers.



LGM for Dairy Cattle

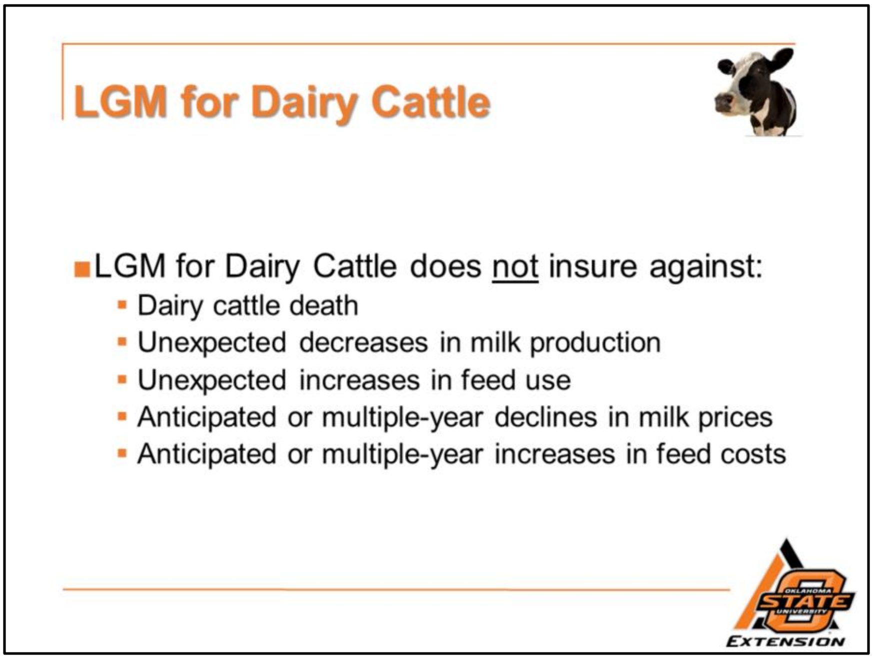
- Provides protection when feed costs rise or milk prices drop and can be tailored to any size farm.
  - Gross margin = the market value of milk minus feed costs.
- LGM-Dairy uses futures prices for corn, soybean meal, and milk to determine the expected gross margin and the actual gross margin. LGM-Dairy is similar to buying both a call option to limit higher feed costs and a put option to set a floor on milk prices.

LGM for Dairy Cattle provides protection when feed costs rise OR milk prices drop. Again just as with cattle and swine the program can be tailored to any size farm.

The formula for gross margin for dairy equals the market value of milk minus feed costs.

LGM Dairy uses futures prices for corn, soybean meal and milk to determine the expected gross margin and the actual gross margin.

LGM Dairy is similar to buying both a call option to limit higher feed costs and a put option to set a floor on milk prices.



LGM for Dairy Cattle

- LGM for Dairy Cattle does not insure against:
  - Dairy cattle death
  - Unexpected decreases in milk production
  - Unexpected increases in feed use
  - Anticipated or multiple-year declines in milk prices
  - Anticipated or multiple-year increases in feed costs

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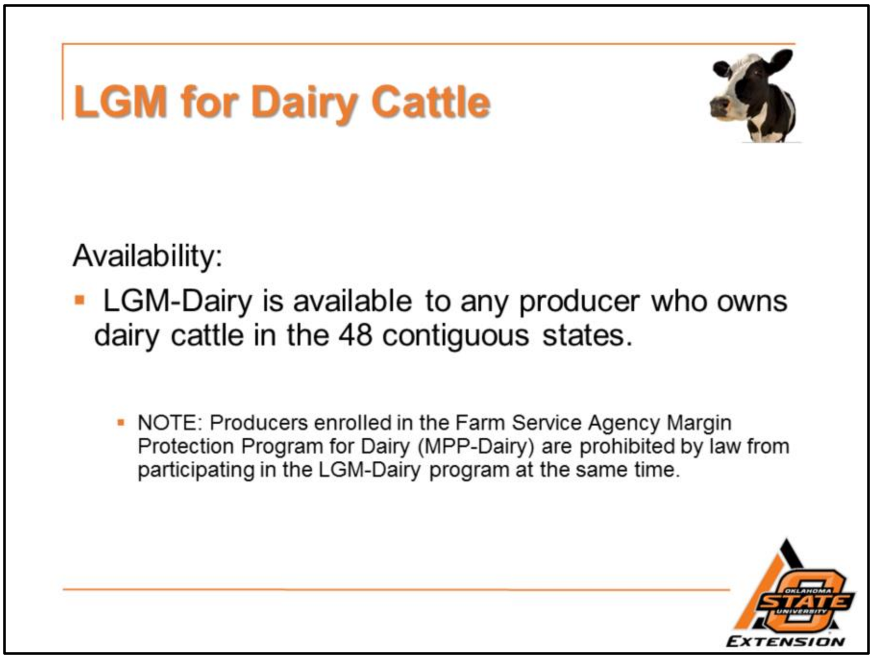
It is again important to note what LGM for Dairy does not include. LGM for dairy does not insure against dairy cattle death, unexpected decreases in milk production, unexpected increases in feed use, anticipated or multiple year declines in milk prices or anticipated or multiple year increases in feed costs.



LGM for Dairy Cattle

Availability:

- LGM-Dairy is available to any producer who owns dairy cattle in the 48 contiguous states.
  - NOTE: Producers enrolled in the Farm Service Agency Margin Protection Program for Dairy (MPP-Dairy) are prohibited by law from participating in the LGM-Dairy program at the same time.

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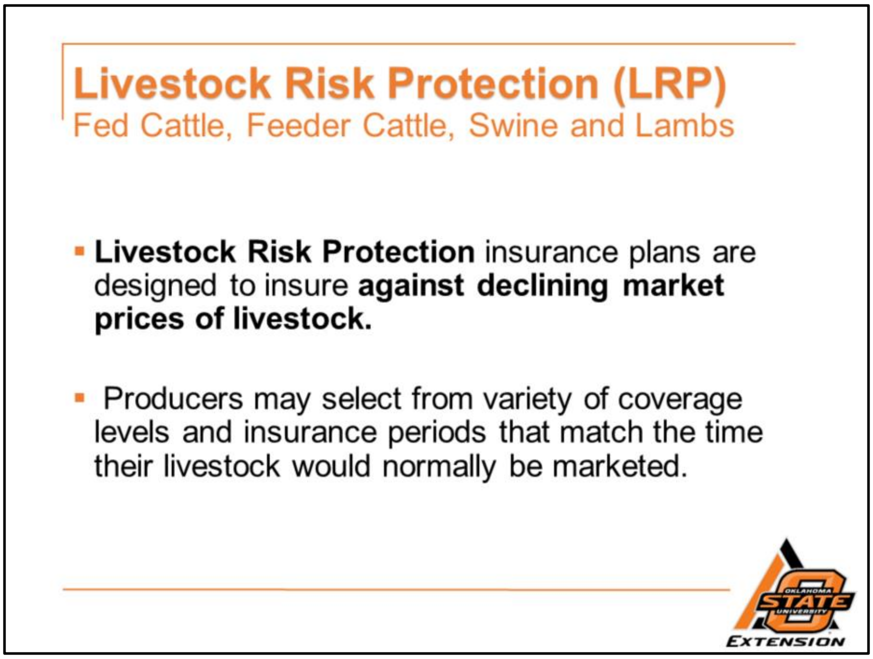
LGM Dairy is available to any producer who owns dairy cattle in the 48 contiguous states.

It is important to note that producers enrolled in the Farm Service Agency margin protection program for dairy (MPP-Dairy) are prohibited by law from participating in the LGM Dairy program at this time.



Livestock Risk Protection (LRP)

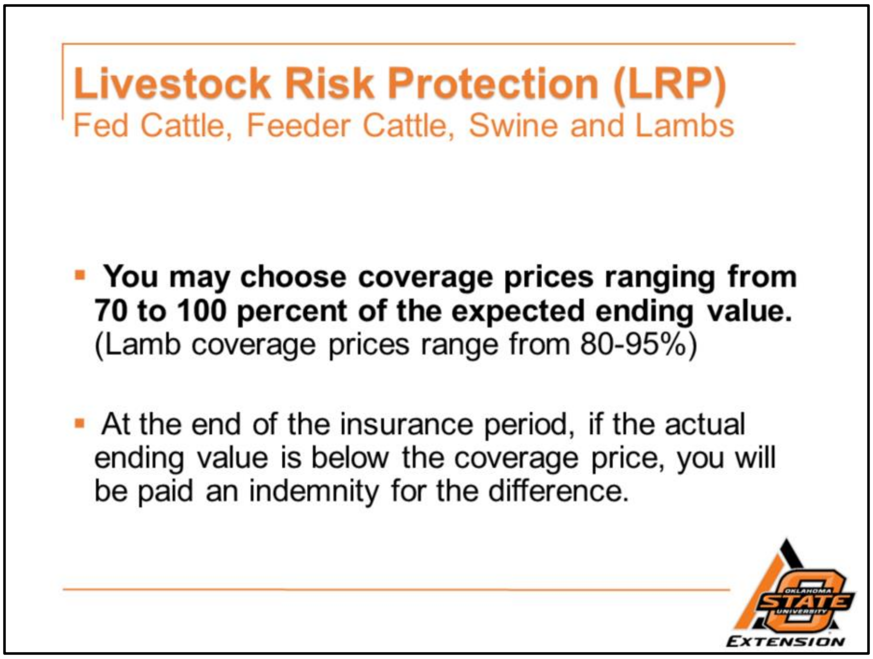
Fed Cattle, Feeder Cattle, Swine and Lambs

- **Livestock Risk Protection** insurance plans are designed to insure **against declining market prices of livestock.**
- Producers may select from variety of coverage levels and insurance periods that match the time their livestock would normally be marketed.

As previously mentioned another option for producers to consider is the Livestock Risk Protection Program (LFP) LRP covers fed cattle, feeder cattle, swine and lambs.

LRP insurance plans are designed to insure against declining market prices of livestock.

Producers may select from a variety of coverage levels and insurance periods that match the time their livestock would normally be marketed.



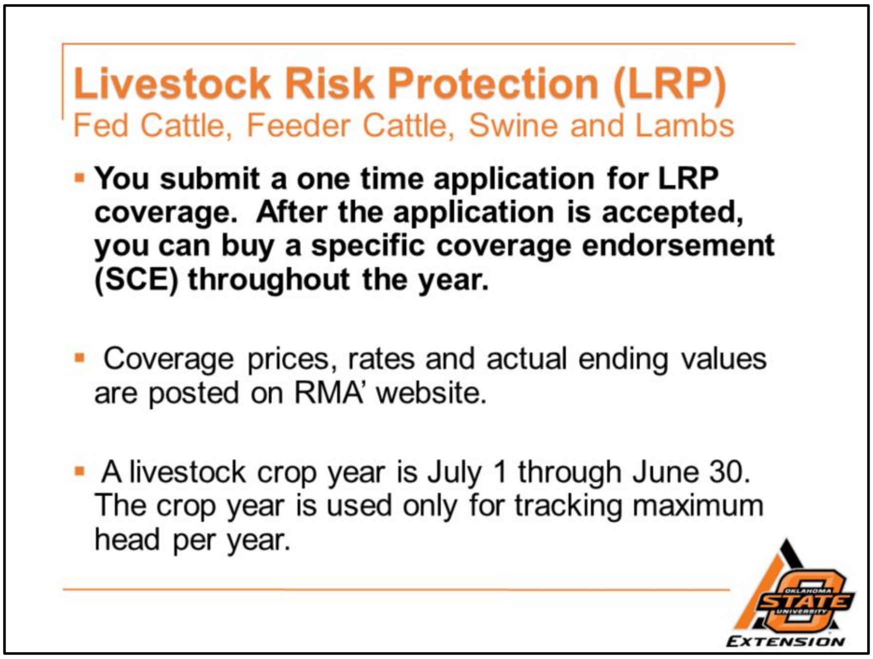
Livestock Risk Protection (LRP)

Fed Cattle, Feeder Cattle, Swine and Lambs

- **You may choose coverage prices ranging from 70 to 100 percent of the expected ending value.** (Lamb coverage prices range from 80-95%)
- At the end of the insurance period, if the actual ending value is below the coverage price, you will be paid an indemnity for the difference.

Producers may choose coverage prices ranging from 70 to 100% of the expected ending value of the livestock. Lamb coverage can range from 80-95%

At the end of the insurance period, if the actual ending value is below the coverage price a producer will be paid an indemnity for the difference.



Livestock Risk Protection (LRP)

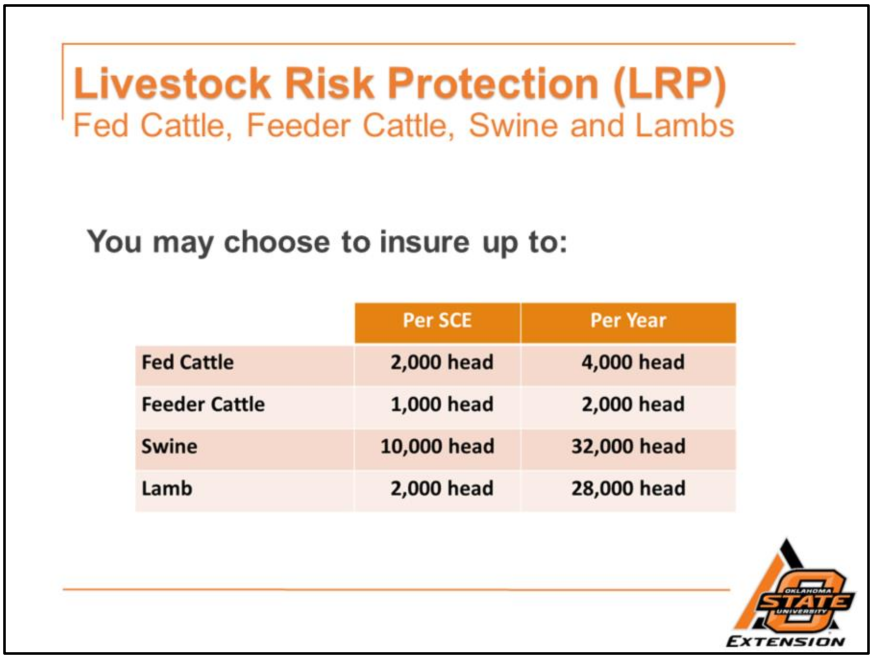
Fed Cattle, Feeder Cattle, Swine and Lambs

- **You submit a one time application for LRP coverage. After the application is accepted, you can buy a specific coverage endorsement (SCE) throughout the year.**
- Coverage prices, rates and actual ending values are posted on RMA' website.
- A livestock crop year is July 1 through June 30. The crop year is used only for tracking maximum head per year.

For the LRP program a producer will submit a one time application for LRP. After the application is accepted the producer can buy a specific coverage endorsement (SCE) throughout the year.

Coverage prices, rates and actual ending values are posted on RMA's website.

A livestock crop year is July 1 through June 30. The crop year is used only for tracking a maximum head per year.



Livestock Risk Protection (LRP)

Fed Cattle, Feeder Cattle, Swine and Lambs

You may choose to insure up to:

	Per SCE	Per Year
Fed Cattle	2,000 head	4,000 head
Feeder Cattle	1,000 head	2,000 head
Swine	10,000 head	32,000 head
Lamb	2,000 head	28,000 head

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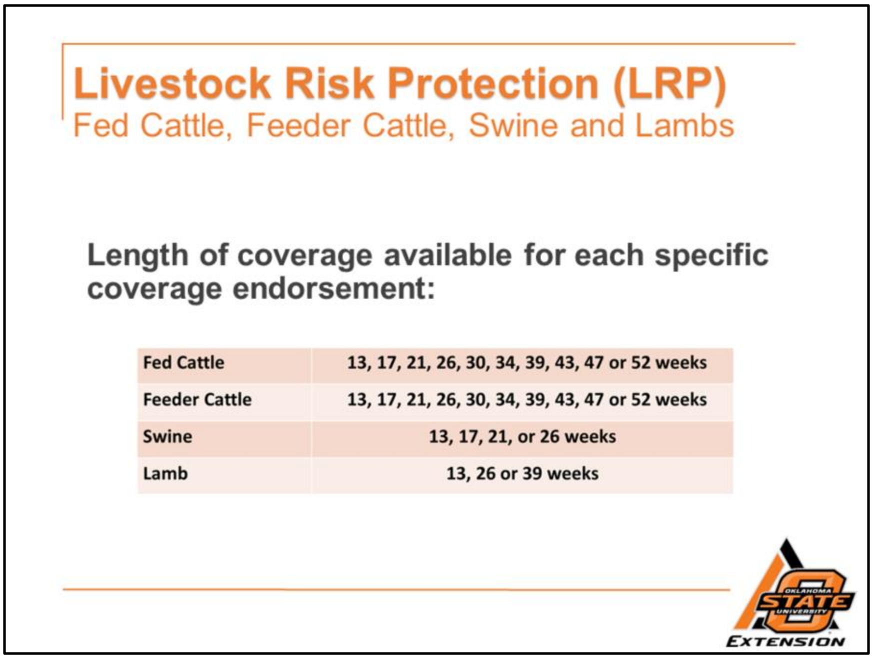
This chart shows the maximum number of head for each special coverage endorsement (SCE) as well as the maximum number of head per year.



Livestock Risk Protection (LRP)

Fed Cattle, Feeder Cattle, Swine and Lambs

Length of coverage available for each specific coverage endorsement:

Fed Cattle	13, 17, 21, 26, 30, 34, 39, 43, 47 or 52 weeks
Feeder Cattle	13, 17, 21, 26, 30, 34, 39, 43, 47 or 52 weeks
Swine	13, 17, 21, or 26 weeks
Lamb	13, 26 or 39 weeks

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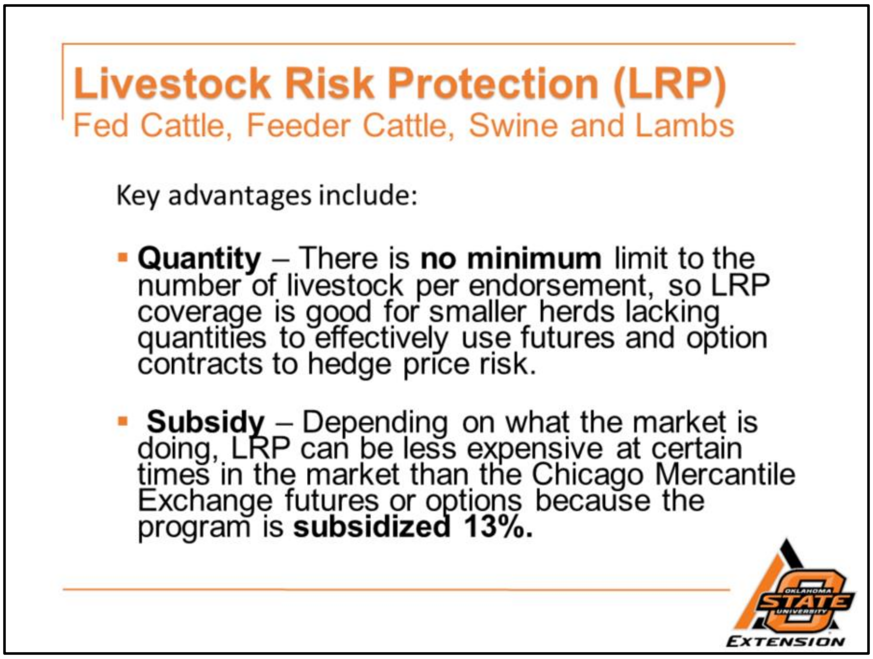
The length of coverage is different for each type of livestock as shown in the chart.



Livestock Risk Protection (LRP)

Fed Cattle, Feeder Cattle, Swine and Lambs

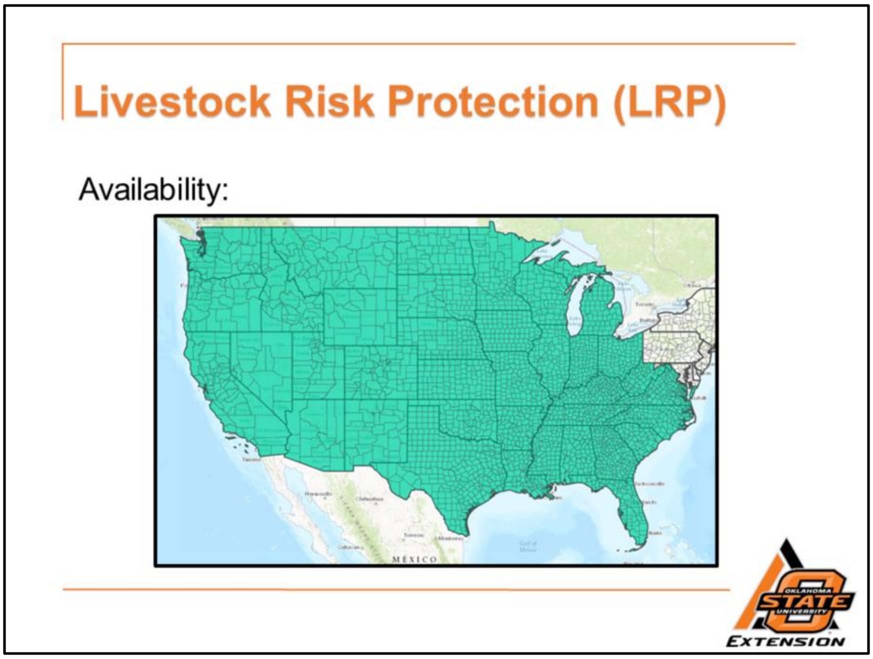
Key advantages include:

- **Quantity** – There is **no minimum** limit to the number of livestock per endorsement, so LRP coverage is good for smaller herds lacking quantities to effectively use futures and option contracts to hedge price risk.
- **Subsidy** – Depending on what the market is doing, LRP can be less expensive at certain times in the market than the Chicago Mercantile Exchange futures or options because the program is **subsidized 13%.**

There are several key advantages that producers may want to take into consideration when deciding rather or not to purchase LRP.

First it is important to remember there is no minimum limit to the number of livestock per endorsement, so LRP coverage is good for smaller herds lacking quantities to effectively use futures and option contracts to hedge price risk.

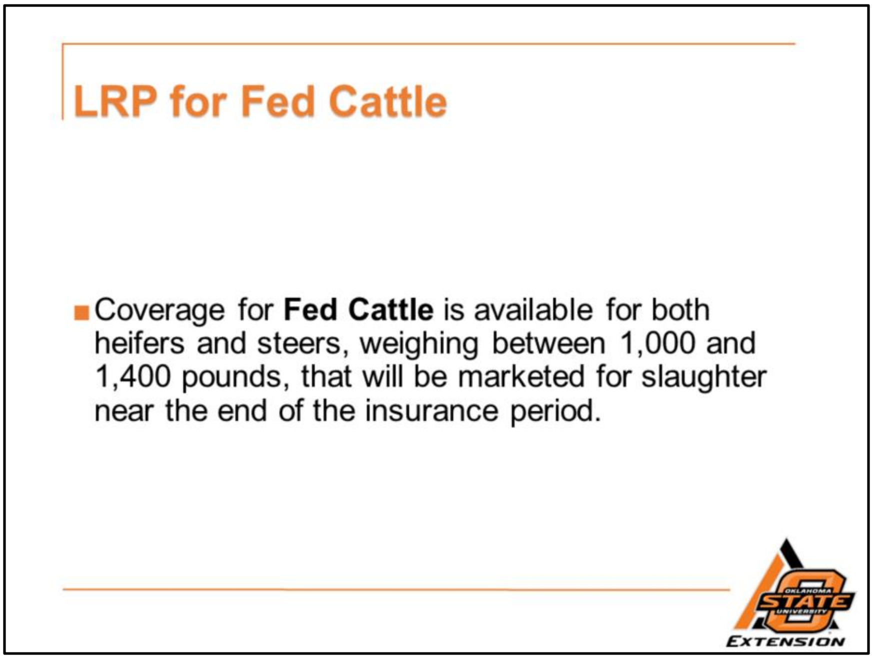
Second LRP includes a federal subsidy. Depending on what the market is doing, LRP can be less expensive at certain times in the market than the Chicago Mercantile Exchange futures or options because the program is subsidized 13%.



Livestock Risk Protection (LRP)

Availability:

LRP is available as shown in the green areas of the map.



LRP for Fed Cattle

- Coverage for **Fed Cattle** is available for both heifers and steers, weighing between 1,000 and 1,400 pounds, that will be marketed for slaughter near the end of the insurance period.

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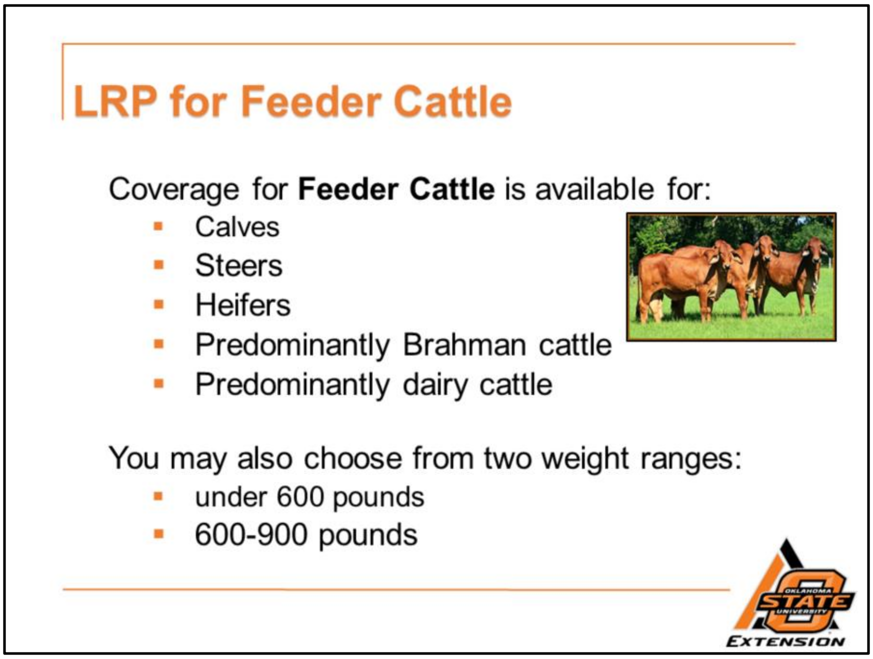
Producers that are looking to protect cattle need to consider the coverage that best fits their operation. Coverage for **fed cattle** is available for both heifers and steers weighing between 1,000 and 1,400 pounds that will be marketed for slaughter near the end of the insurance period.



LRP for Feeder Cattle

Coverage for **Feeder Cattle** is available for:

- Calves
- Steers
- Heifers
- Predominantly Brahman cattle
- Predominantly dairy cattle

You may also choose from two weight ranges:

- under 600 pounds
- 600-900 pounds

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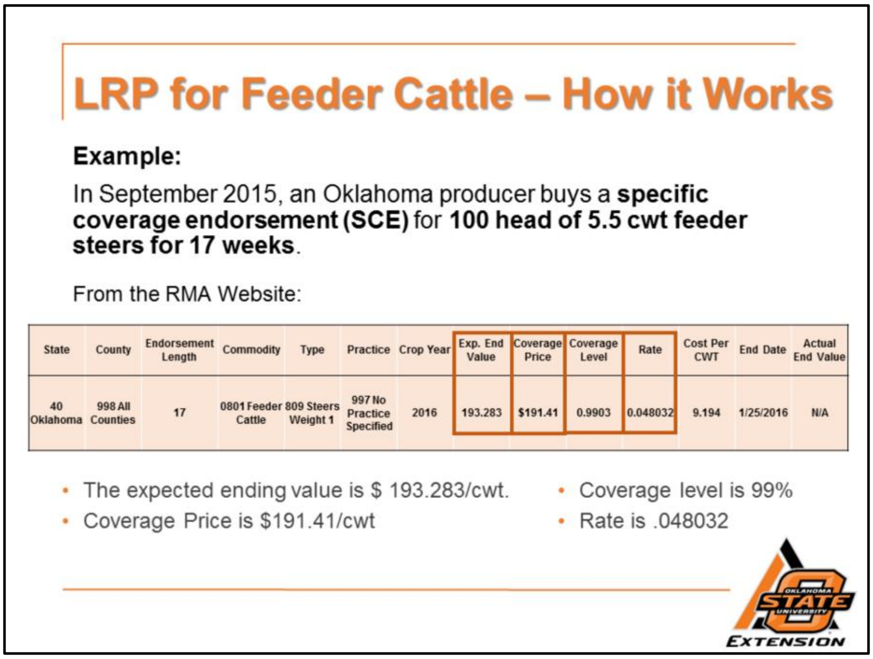
EXTENSION

Coverage for **feeder cattle** is available for calves, steers, heifers, predominantly Brahman cattle and predominantly dairy cattle. Producers can select from two weight ranges – under 600 pounds or 600-900 pounds.



LRP for Feeder Cattle – How it Works

Example:

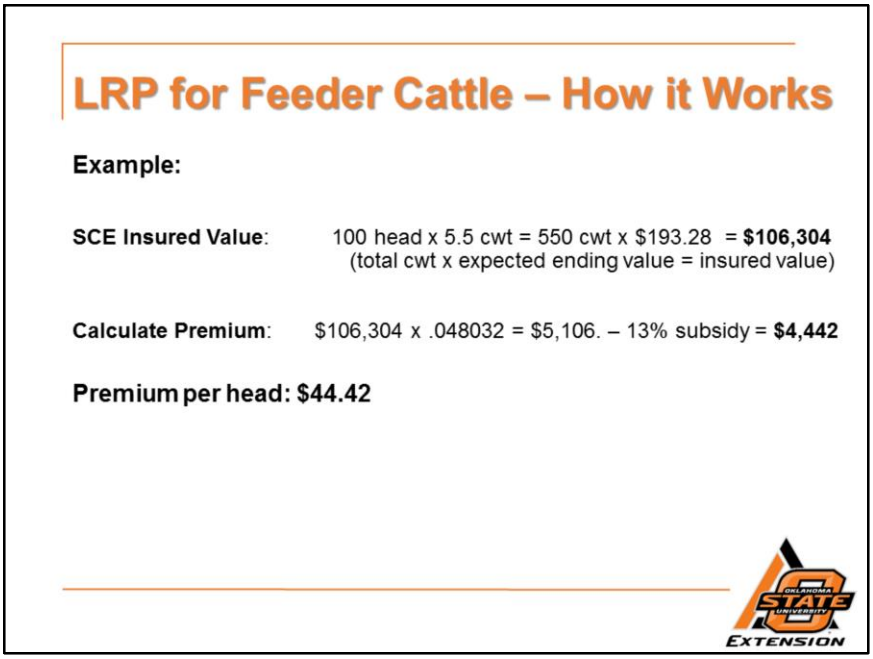
In September 2015, an Oklahoma producer buys a **specific coverage endorsement (SCE)** for **100 head of 5.5 cwt feeder steers for 17 weeks**.

From the RMA Website:

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	End Date	Actual End Value
40 Oklahoma	998 All Counties	17	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2016	193.283	$191.41	0.9903	0.048032	9.194	1/25/2016	N/A

- The expected ending value is $ 193.283/cwt.
- Coverage Price is $191.41/cwt
- Coverage level is 99%
- Rate is .048032

Walking through a feeder cattle example will help explain the program. In September 2015, an Oklahoma producers buys a specific coverage endorsement (SCE) for 100 head of 5.5 cwt feeder steers for 17 weeks. The producer can find the needed information in regard to the coverage listed on the RMA Website. The website shows that the expected ending value is $193.283/cwt, the coverage price is $191.41/cwt, the coverage level is at 99% and the rate is .048032.



LRP for Feeder Cattle – How it Works

Example:

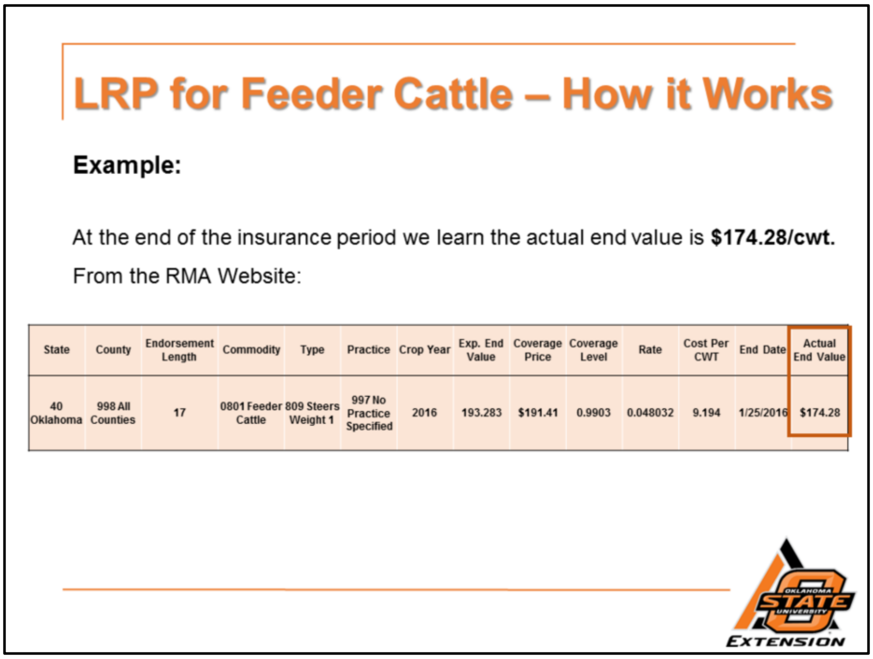
SCE Insured Value: 100 head x 5.5 cwt = 550 cwt x $193.28 = **$106,304**
(total cwt x expected ending value = insured value)

Calculate Premium: $106,304 x .048032 = $5,106. – 13% subsidy = **$4,442**

Premium per head: $44.42

Moving forward with the same example the producer can calculate the specific coverage endorsement (SCE) insured value which equals the 100 head times the 5.5 cwt times the expected ending value. Which in this case totals $106,304.

The premium in this example equals the insured value of $106,304 times the rate of .048032 minus the 13% subsidy which equals $4,442 or $44.42/head.



LRP for Feeder Cattle – How it Works

Example:

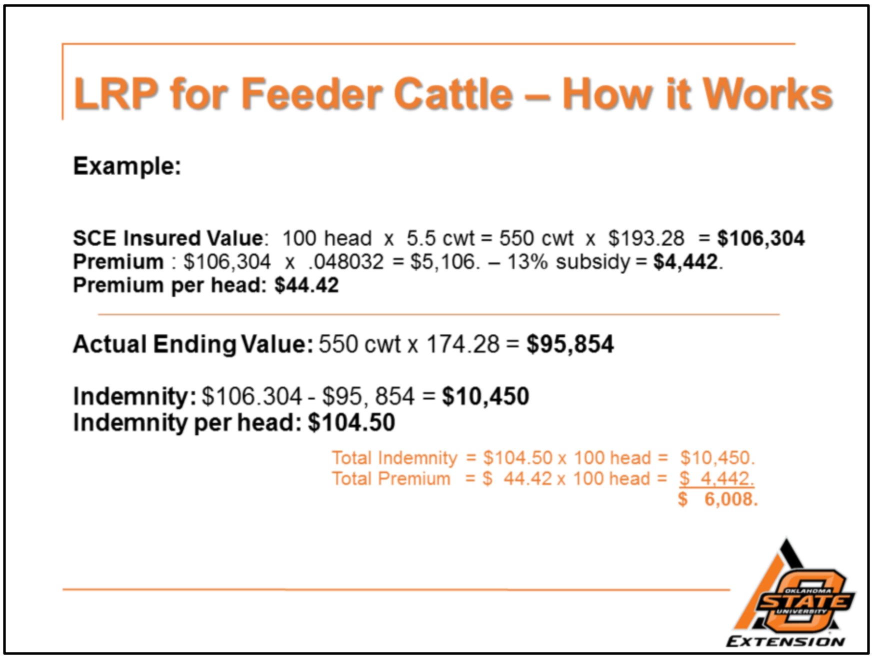
At the end of the insurance period we learn the actual end value is **$174.28/cwt.**

From the RMA Website:

State	County	Endorsement Length	Commodity	Type	Practice	Crop Year	Exp. End Value	Coverage Price	Coverage Level	Rate	Cost Per CWT	End Date	Actual End Value
40 Oklahoma	998 All Counties	17	0801 Feeder Cattle	809 Steers Weight 1	997 No Practice Specified	2016	193.283	$191.41	0.9903	0.048032	9.194	1/25/2016	$174.28

OKLAHOMA STATE UNIVERSITY EXTENSION

At the end of the insurance period the RMA website will post the actual end value. In this example the end value equals $174.28.



LRP for Feeder Cattle – How it Works

Example:

SCE Insured Value: 100 head x 5.5 cwt = 550 cwt x $193.28 = **$106,304**
Premium : $106,304 x .048032 = $5,106. – 13% subsidy = **$4,442**.
Premium per head: $44.42

Actual Ending Value: 550 cwt x 174.28 = **$95,854**

Indemnity: $106.304 - $95, 854 = **$10,450**
Indemnity per head: $104.50

Total Indemnity = $104.50 x 100 head = $10,450.
Total Premium = $ 44.42 x 100 head = $ 4,442.
$ 6,008.

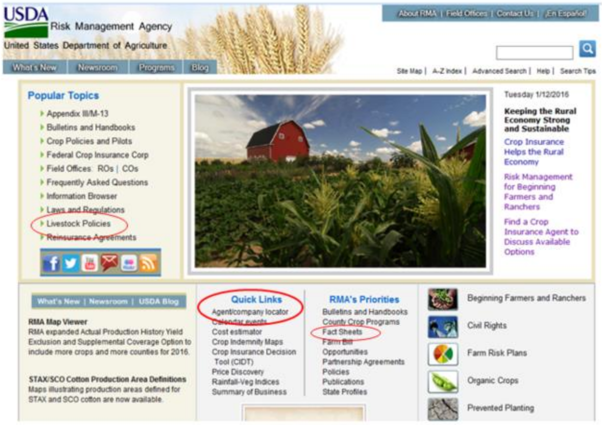
EXTENSION

Once the end value is established the producer will know if an indemnity is payable. Again using the same example the producer insured 100 head of feeder cattle at a insured value of $106,304. The premium paid by the producer equaled $4,442 or $44.42/head.

At the end of the insurance period the actual end value of the feeder cattle was $95,854 which is $10,450 lower than the insured value of $106,304. Therefore an indemnity of $10,450 or $104.50/head is due to the producer.

Taking the premium into account the producer in this example has a net indemnity of $6,008 or $60.08/head.

Visit the RMA website: www.rma.usda.gov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Newsroom
Programs
Blog
Site Map | A-Z Index | Advanced Search | Help | Search Tips
Popular Topics
Appendix III/M-13
Bulletins and Handbooks
Crop Policies and Pilots
Federal Crop Insurance Corp
Field Offices: ROs | COs
Frequently Asked Questions
Information Browser
Laws and Regulations
Livestock Policies
Reinsurance Agreements
Tuesday 1/12/2016
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Agent/company locator
Calendar events
Cost estimator
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Crop Insurance Decision Tool (CIDT)
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Summary of Business
RMA's Priorities
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Crop Insurance Helps the Rural Economy

Risk Management for Beginning Farmers and Ranchers

Find a Crop Insurance Agent to Discuss Available Options

RMA Map Viewer
RMA expanded Actual Production History Yield Exclusion and Supplemental Coverage Option to include more crops and more counties for 2016.

STAX/SCO Cotton Production Area Definitions
Maps illustrating production areas defined for STAX and SCO cotton are now available.

OKLAHOMA STATE UNIVERSITY EXTENSION

There are several useful links for producers on the RMA Website. On the left column producers can click on Livestock Policies to get detailed information about the programs discussed in this presentation as well as coverage prices, rates and actuarial ending values. The link also includes more detailed reference material.

In the center under *"quick links"* a producer can use the Agent/Company Locator to search for a local insurance agent.

In addition, on the right under RMA priorities producers can find helpful fact sheets for livestock products as well as other programs.

Thank you!