Utilizing Livestock Risk Protection (LRP) for Feeder Cattle

Market prices fluctuate daily, creating uncertainty for cattle producers who need to buy or sell advantageously. Selling today versus tomorrow can sometimes mean the difference between a profit and a loss. A risk management tool available to protect against potential decreases in market prices is the Livestock Risk Protection (LRP) insurance program for feeder cattle, lambs and swine (United States Department of Agriculture Risk Management Agency, 2018). Livestock producers who engage in LRP insurance will receive indemnity payments when the actual ending value is below the coverage price (USDA RMA, 2018). However, utilizing the LRP program does not guarantee a profit. A producer engaged in the program can lose money on their livestock and still not receive an indemnity payment if they did not insure their livestock with a high enough coverage price. This program is administered through the USDA RMA.

Program Overview

When considering price risk management options, there are a few tools available to feeder cattle producers, such as futures and options contracts and various insurance programs. The Livestock Risk Protection (LRP) insurance program provides a price risk management tool for feeder cattle producers (USDA RMA, 2018). LRP protects producers from potential price declines by establishing a price floor, similar to a put option. Feeder cattle put options are based on 50,000-pound contracts (CME Group, 2017), while LRP can be utilized to insure as few as one animal (USDA RMA, 2018). Therefore, LRP is available to any size operation and provides downside risk price protection to smaller operations that cannot fulfill a contract. When the Feeder Cattle Index falls below the coverage price, which is selected by the producer, an indemnity payment is made (USDA RMA, 2018). Indemnity payments are determined by the actual ending value of the CME Feeder Cattle Cash Price Index and the selected coverage price (USDA

RMA, 2018). The payment will be the difference between the coverage price and actual ending Feeder Cattle Cash Price Index. A producer can choose the endorsement length (13 to 52 weeks), the coverage level (70 to 100 percent), and the number of head to insure (1 to 2,000 head per production cycle) (USDA RMA, 2018). These decisions will determine the producer's premium cost, which is subsidized 13 percent by the federal government (USDA RMA, 2018).

Getting Started

LRP is offered by licensed and approved crop insurance agents (USDA RMA, 2018). A producer must fill out an application form to begin. Producers in all eligible states with an ownership share in livestock are eligible. (USDA RMA, 2018). Once enrolled, a producer will fill out a Specific Coverage Endorsement (SCE) form to specify the desired effective date, endorsement length and coverage price, which will determine the coverage level relative to the expected ending value as well as the premium cost (USDA RMA, 2018). Varying coverage levels, premiums and ending dates are calculated and made available by the USDA each day because they are based on actual futures and options trades (USDA RMA, 2018). A producer's desired LRP coverage option may not be available each day because of the day-to-day variation. Lastly, the producer also will specify in which state the livestock will be insured, and the type and number of head to insure.

Making Decisions

A producer wants to choose the right endorsement length, coverage price and number of head insured to meet their risk management objectives. The endorsement length should align with the end date – when the producer plans to sell livestock (USDA RMA, 2018). However, livestock do not have to be sold at the end of the endorsement period if the owner wants to continue to retain ownership without any price protection.

Cooperating Agencies:

For example, if a producer purchases winter stocker steers in November, plans to graze them for 115 days and sell them in March, they should choose a 17-week LRP policy. The coverage price will act as a price floor, so the producer wants to make sure that the floor will at least cover their costs (USDA RMA, 2018), if they are unwilling to accept any of the price risk themselves. To make this decision, the producer must know their break-even price, the price at which to sell livestock to cover costs. When looking at coverage options offered on a given day, choose a coverage plan above break-even price to be fully protected. Include the risk management cost into break-even by adding 87 percent of the premium cost (13 percent is subsidized) to the break-even value (USDA RMA, 2018). Some producers may be willing to self insure to a point, then they would select a coverage price to meet the remaining need. Additionally, a producer may or may not decide to insure the entire herd, or may spread out their risk by insuring some livestock at different coverage levels than others to reduce the amount of premium paid.

LRP Effectiveness Example

To understand the effectiveness of LRP for a small operation, use of the program was simulated across a historical five-year period for an Oklahoma winter stocker operation (2013-2017) and a historical four-year period (2014-2017) for an Oklahoma summer stocker operation.

Winter Stocker Scenario

It was assumed a producer purchased 20 head of 500-pound steers in November each year, and sold them as 750-pound feeder steers the following March at OKC-West Livestock Market in El Reno. Each November, the expected break-even price (estimated here using historical prices to account for production costs) was calculated and an LRP policy was chosen accordingly, insuring all cattle at the same coverage level. Table 1 shows the cost and LRP coverage for each year.

Based on calculations using the decision support tool, the producer's LRP policy only triggered an indemnity payment in one out of five years, when the actual ending value fell below the coverage price.[1] Figure 1 illustrates the difference in net

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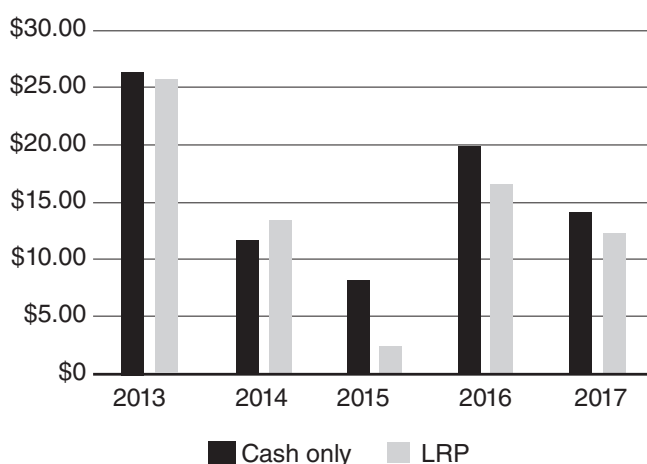1   United States Department of Agriculture Risk Management Agency "LRP Coverage Prices, Rates, and Actual Ending Values" available at: https://www.rma.usda.gov/en/Information-Tools/Livestock-Reports

Figure 1. Difference in net cash profit for a winter stocker venture operating on a cash-only basis vs. engaging in LRP.

Note: Based on purchasing 20 head of 500-pound steers in November each year, and selling them as 750-pound feeder steers the following March at OKC-West Livestock Market in El Reno, OK.
Calculations were made using the USDA RMA LRP Coverage Prices, Rates and Actual Ending Values Criteria.

cash profit if the producer operated on a cash-only basis without risk management versus utilizing LRP.

Each year, excluding 2014, the producer would have profited more without engaging in LRP; however, they would also have been more exposed to risk. The actual ending value was increased relative to the coverage price in most cases, thus leading to the cash-only scenario being more profitable. Although the producer incurred the additional cost of participating in LRP each year and only received a payment one of those years, a price floor was built in, protecting them from a potential loss if prices had fallen unexpectedly. In most cases, the actual ending value is greater than expected, resulting in the cash scenario being more profitable. Notably, the producer did not experience a loss during the five-year period due to LRP because the LRP premium cost was incorporated into the break-even point prior to selecting a coverage option.

Summer Stocker Scenario

It was assumed that a producer purchased 77 head of 500-pound steers in June each year, and sold them as

Table 1. Values from a winter stocker operation engaging in LRP during a five-year period.

Effective Date	Endorsement Length, weeks	Breakeven $/cwt	LRP Producer Premium Cost $/cwt	Breakeven w/ LRP, $/cwt	Coverage price $/cwt	Actual Ending Value, $/cwt	Indemnity payment,$/cwt
11/13/13	17	139.49	0.62	140.11	148.02	173.88	-
11/19/14	17	204.83	1.66	206.48	216.04	212.61	3.43
11/18/15	17	148.16	5.70	153.86	154.08	161.52	-
11/16/16	17	108.83	3.37	112.20	112.24	128.22	-
11/15/17	17	130.16	1.85	132.01	138.11	142.81	-

Note: Based on purchasing 20 head of 500-pound steers in November each year, and selling them as 750-pound feeder steers the following March at OKC-West Livestock Market in El Reno, OK.
Calculations were made using the USDA RMA LRP Coverage Prices, Rates and Actual Ending Values Criteria.

650-pound feeder steers in September at OKC-West Livestock Market in El Reno. Each June, the expected break-even price (estimated here using historical prices to account for production costs) was calculated and an LRP policy was chosen accordingly, insuring all cattle at the same coverage level.[1] Table 2 shows the cost and LRP coverage for each year.

The producer's LRP policy triggered an indemnity payment two out of four years, when the actual ending value fell below the coverage price. Figure 2 illustrates the difference in net cash profit if the producer operated on a cash-only basis without risk management.

Each year, excluding 2015, the producer would have profited more without engaging in LRP. In 2015, not employing any risk management would have caused the producer to lose $0.34 per hundred weight. The producer did not experience a loss across the four-year period due to LRP because they incorporated the LRP premium cost into their break-even price prior to selecting a coverage option. The producer incurred the additional cost of participating in LRP each year and only received a payment that covered the premium cost one of those years.

Conclusion

When deciding to purchase an LRP policy, consider whether the program is suitable to meet risk management goals. Outcomes will differ for producers in different regions, operating in different cash markets with varying objectives. Producers should be aware of the change in policy options provided daily, being sure to include the premium cost in the break-even price when determining which coverage will be adequate to cover all production costs. Producers can see how this program would impact their operation by utilizing the USDA RMA's LRP Coverage Prices, Rates and Actual Ending Values Criteria interactive tool found at https://www.rma.usda.gov/en/Information-Tools/Livestock-Reports. Although the given scenarios did not consistently show a higher return for producers who used LRP, they did not show negative returns. Remember, the purpose of LRP is to provide protection from loss due to declining market prices rather than increase profits (USDA RMA, 2018). A producer has to decide whether the protection is worth the cost or if they can afford to be self-insured against market price downturns.

Figure 2. Difference in net cash profit for a summer stocker venture operating on a cash-only basis vs. engaging in LRP.

Note: Based on purchasing 77 head of 500-pound steers in June each year, and selling them as 650-pound feeder steers the following September at OKC-West Livestock Market in El Reno, OK. Calculations were made using the USDA RMA LRP Coverage Prices, Rates and Actual Ending Values Criteria.
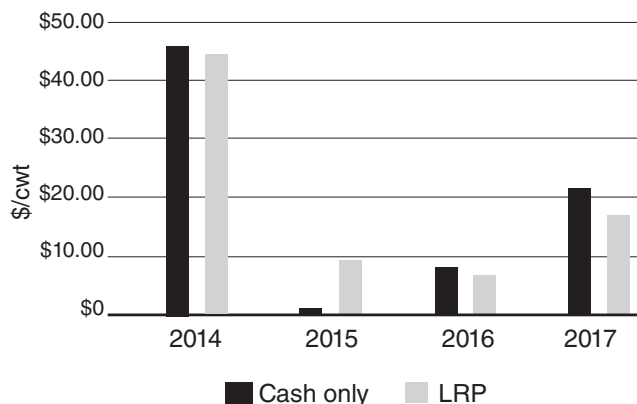
References

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United States Department of Agriculture, Risk Management Agency. (2018). Livestock Risk Protection Feeder Cattle. Washington, DC. Retrieved from https://www.rma.usda.gov/Fact-Sheets/National-Fact-Sheets/Livestock-Risk-Protection-Feeder-Cattle-2018.

Table 2. Values from a summer stocker operation engaging in LRP during a four-year period.

Effective Date	Endorsement Length, weeks	Breakeven $/cwt	LRP Producer Premium Cost $/cwt	Breakeven w/ LRP, $/cwt	Coverage price $/cwt	Actual Ending Value, $/cwt	Indemnity payment, $/cwt
6/11/14	13	188.47	1.31	189.61	189.79	226.98	-
6/10/15	13	215.39	3.18	218.16	218.55	205.54	13.01
6/15/16	13	131.55	6.26	136.99	138.15	133.49	4.66
6/14/17	13	131.16	4.66	135.22	138.12	149.46	-

Note: Based on purchasing 77 head of 500-pound steers in June each year, and selling them as 650-pound feeder steers the following September at OKC-West Livestock Market in El Reno, Okla.
Calculations were made using the USDA RMA LRP Coverage Prices, Rates and Actual Ending Values Criteria.

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Natalie Graff
Graduate Research Assistant,
Department of Agricultural Economics, Texas A&M University

Mckenzie Carvalho
Undergraduate Research Assistant,
Department of Agricultural Economics, Oklahoma State University

Myriah Johnson
Economics Program Lead and Agricultural Economics Consultant,
Noble Research Institute, LLC

Amy Hagerman
Assistant Professor,
Department of Agricultural Economics, Oklahoma State University