W 1097

Producer Focus Groups:
Price Risk Management Contributions to Economic Sustainability in the Cattle Industry

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Background

Sustainable beef production is categorized into environmental stewardship, economic opportunity and social diligence across the beef value chain. However, cattle producers must be able to benefit from the economic opportunity in order to adopt the environmental and social components. Economic sustainability is commonly understood to be a farm's capability to survive or to be economically viable over time. Making profitable short-run decisions is key to surviving long-term (Griffith and Boyer, 2020). A key component in economic sustainability is having access to and using effective tools and strategies to reduce economic losses.

Cattle producers must manage many forms of risk (e.g. production, financial, technological, legal, casualty, policy), but all sources of risk have been relatively small compared to price risk (Hart, Babcock, and Hayes, 2001). Providing stocker and cow-calf producers with information on how to utilize price risk management tools would benefit these producers in making economically sustainable decisions and allowing them to endure and continue operating during and following economic shocks. However, it is also important to gain the cattle producer's viewpoint on price risk management tools. Therefore, the specific objectives of the focus groups were to:

1. Determine the attributes of currently available price risk management tools that lead to non-use or fail to mitigate risk; and
2. Provide discussion from producers about ways to improve risk management tools and strategies for cow-calf and stocker producers.

The goal of this effort is to help guide continuing education to beef cattle producers as well as inform policy makers and private industry on ways to improve price risk management to enhance economic sustainability for beef cattle producers.

Focus Groups

We met with two groups of producers from different regions of Tennessee to receive feedback on their use or nonuse of risk management tools for their cattle operations. The first producer focus group was held on March 4, 2021, in Lewisburg, Tennessee. There were 12 participants. The second producer focus group took place on March 8, 2021, in Madisonville, Tennessee. This group also had 12 participants. A third focus group was attempted on June 24, 2021, in Springfield, Tennessee, with only two producers attending but valuable information was provided.

Focus groups included cow-calf producers with as few as 30 cows and as many as 700 breeding females, stocker producers running 120 to 1,200 feeder cattle annually, and at least six producers that owned cattle in the feedlot in the past 12 months. Figure 1 shows the participants' previous use of price risk management tools. Producers could choose all that apply. The Lewisburg focus group had a greater variety of risk management tools used with options

and LRP being the most common. The Madisonville focus group utilized futures and options the most. Some noted the reason for using price risk management was "to lock in a profitable price and limit losses," suggesting they are pleased with how they use price risk management. However, others noted "we use it to offset risk but it does not always work," suggesting that they use price risk management but the outcomes are not always preferable. Another producer commented, "I do not know how people stay in business not using price risk management," indicating the need for these tools to operate at a profitable level.

Figure 2 displays reasons for not using price risk management including fear of losing money, expectations of prices increasing, lack of understanding, belief these tools do not work as advertised, lack of comfort with the tools, lack of time to study the available alternatives, and inflexibility of the products (i.e., "no good hedging alternative"). The Lewisburg participants cited fear as the greatest reason for nonuse of risk management tools closely followed by their focus on production and not understanding the tools. The Madisonville participants on the contrary cited that the products being too expensive, their lack of understanding the products, and there being no good alternative that worked for them as all equal reasons for nonuse of price risk management. One producer stated, "People like myself are not using price risk management, because we do not want to spend more money," suggesting the tools maybe too expensive relative to their value.

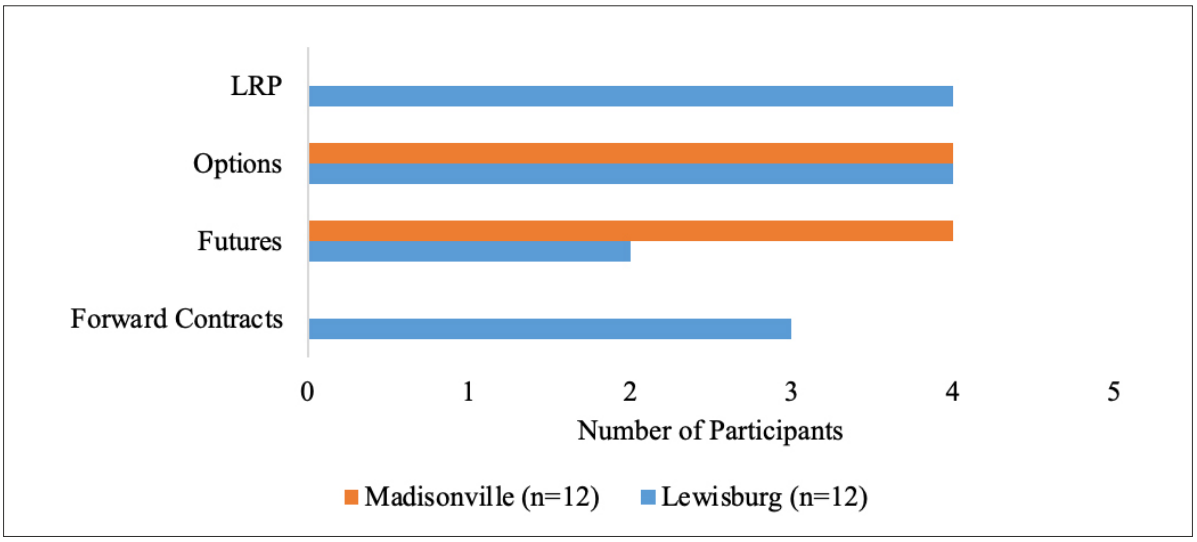

Figure 1. Tennessee focus group participants' use of price risk management tools.

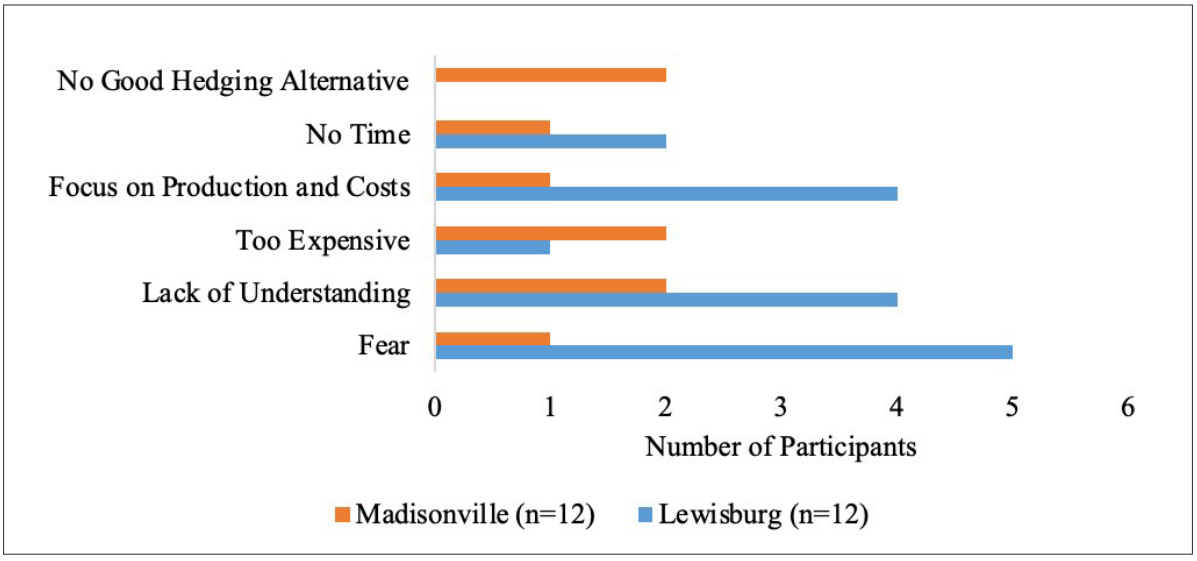

Figure 2. Tennessee focus group participants' reasons for nonuse of price risk management tools.

Figure 3 shows recommendations from the focus groups of what might increase use of risk management tools. These recommendations included increasing the affordability, making them easier to use, further developing education on these tools, and ensuring they will benefit from its use. We can see from this figure that Lewisburg producers were most attracted by ease of use and affordability while Madisonville producers thought education and trusted benefits to be the most important to promote adoption of risk management products.

Ultimately, a lack of knowledge and understanding coupled with the fact that there is a cash expense when using these tools is what leads to non-use based on the focus group participants. The lack of knowledge is not simply how to use the products, but it includes not fully understanding and knowing what local basis is and thus being able to calculate an expected cash price, how to enter and exit a futures position, who to contact to be their broker or insurance agent, and the understanding that an initial price risk management decision does not have to be the final price risk management decision. Based on focus group participant comments, the idea of incurring a cash expense results in a fear of being worse off from a price standpoint than if they did nothing at all. The lack of a complete working knowledge and understanding of price risk management tools further exacerbates that fear and results in non-use.

It is clear there is a need for increased education on the available tools, because many of the participants work with feedlot managers to manage price risk of cattle in the feedlot. However, they view the feedlot manager as a trusted adviser, and the feedlot manager typically handles the trading of futures or purchases insurance on behalf of the producer. Furthermore, several of the focus group participants are grain and oilseed producers. They market grain and oilseeds via their local grain elevator, which is utilizing the futures and options markets to secure the price the producer contracted. Thus, some of these tools are being utilized in the background on the producer's behalf to secure a price.

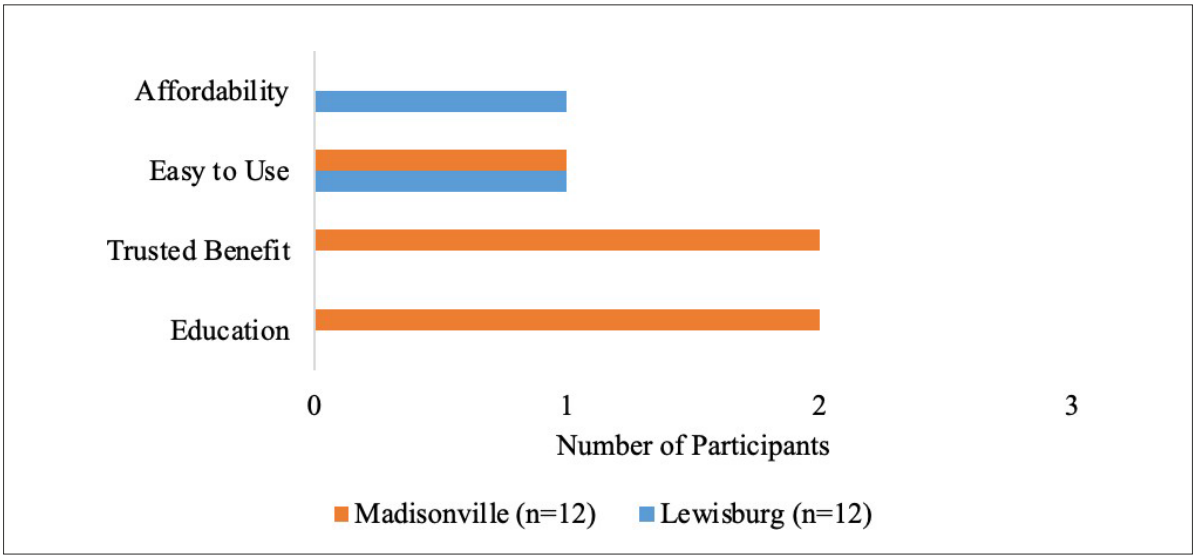

Figure 3. Tennessee focus groups recommended traits to increase use of price risk management tools.

Futures and LRP Effectiveness

Focus group participants expressed concern with volatility in the marketplace and the inability to hedge a profit in some situations. Volatility is market driven and producers' concern is primarily related to capital constraints in holding a position. It is difficult to hold positions during extreme volatility and the primary solution is a larger line of credit. Similarly, it is difficult to analytically evaluate if producers could hedge a profit due to differing production costs and management strategies. However, it is possible to determine if producers could have achieved a higher price if they would have used a price risk management tool.

Figure 4 presents the number of days in which the daily settlement price for each feeder cattle futures contract exceeded the final contract expiration price from 2015 through 2020. From August 2015 through November 2016, each contract had at least 182 days in which the specific contract traded over the final closing price for the contract. These months correspond to the time period when feeder cattle prices were coming off historic highs and began trading lower. The total trading days for any contract varies based on holidays and the closing day of the contract. However, most contracts will have approximately 250 trading days. Thus, the contract months of January, April, May, September, October and November of 2016 saw at least 80 percent of the daily closing values exceed the final contract close for the respective month. Alternatively, all of the 2017 contracts except January had fewer than 90 days in which the daily close exceeded the final contract closing price. This would be due to cattle prices experiencing low prices in 2016 and attempting to rebound in 2017. The six-year average (2015-2020) demonstrates the number of days the daily closing price exceeds the final contract close price ranges from 138 to 164 days. Thus, it is typical to have more than half of the life of a contract to trade above its final closing price. This indicates the futures market could have reduced losses from price declines in the feeder cattle market. It is also important to note that the results were influenced by the Tyson Holcomb facility fire in August 2019 and by the onset and continuation of the COVID-19 pandemic in 2020.

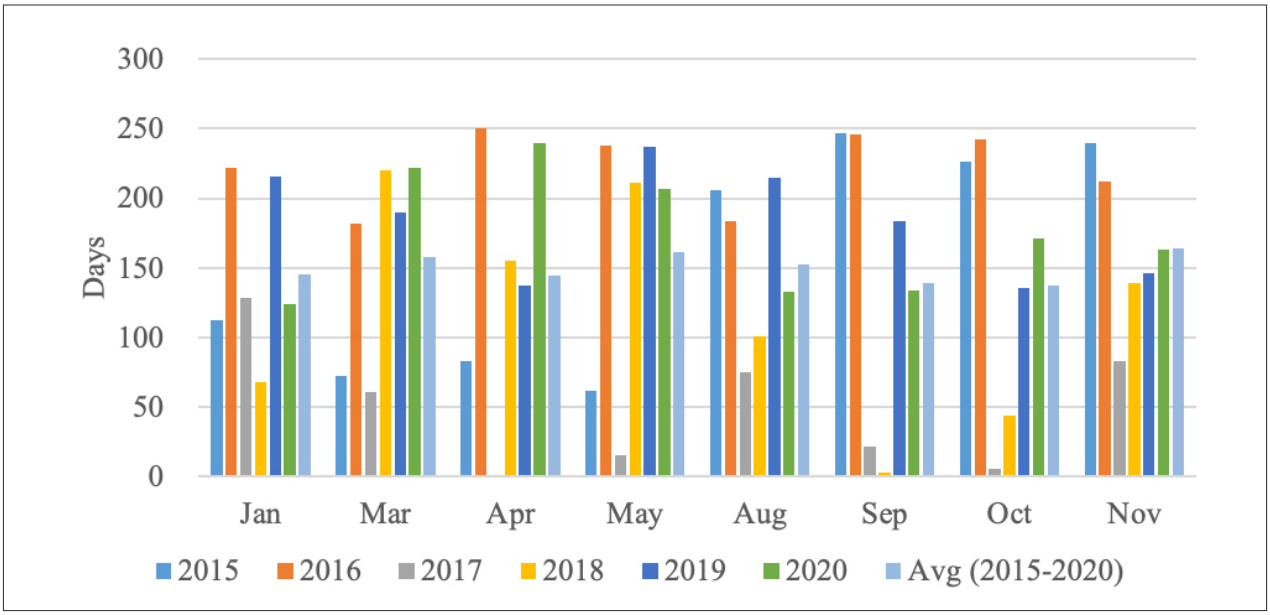

Figure 4. Number of days the daily settlement price of feeder cattle futures contracts exceeded the final contract close price during the life of the contract (2015-2020). (LMIC, 2021)

LRP data from 2014 through 2020 demonstrates similar opportunities for successful price risk management of feeder cattle as the futures market (USDA RMA, 2021b). Figure 5 contains information on the average monthly difference in the indemnity payment and producer premiums (i.e., net price) and the probability of receiving an indemnity payment for contracts less than 30 weeks and coverage levels over 85 percent. A visual inspection of the likelihood of receiving a premium from LRP between 2014-2018 ranged from 13 percent (August) to 35 percent (February, October and November) across the months. Probability of receiving a LRP payment was lowest from May through September, which corresponds with common seasonal increases in feeder cattle prices. However, the net price was less than zero seven out of 12 months. In months when net price was positive, it was always less than $3 per cwt.

Focusing on 2019 and 2020 when the market was influenced by the Tyson Holcomb fire and COVID-19, these probabilities and net price drastically changed. The likelihood of LRP contracts paying an indemnity ranged between 79 percent and 81 percent from May to September of 2019. The likelihood of getting an LRP indemnity payment peaked in the months when LRP is traditionally less likely to provide a payment. The net price during this period was $3 to $8 per cwt.

In 2020, 95 percent of all LRP contracts terminating in April received an indemnity payment, which corresponds with the beginning of COVID-19. These payments and the likelihood of a payment declined after April as cattle markets began a slow recovery. The net price for the LRP contract terminating in April was on average about $11 per cwt. The net price was positive for May through July but after August of 2020 the net price was negative. Another interesting observation in 2020, when LRP was typically paying a positive net price from 2014-2018, the net price was negative in 2020. The results clearly demonstrate LRP was effectively setting a price floor in months when prices dramatically declined like in 2019 and 2020.

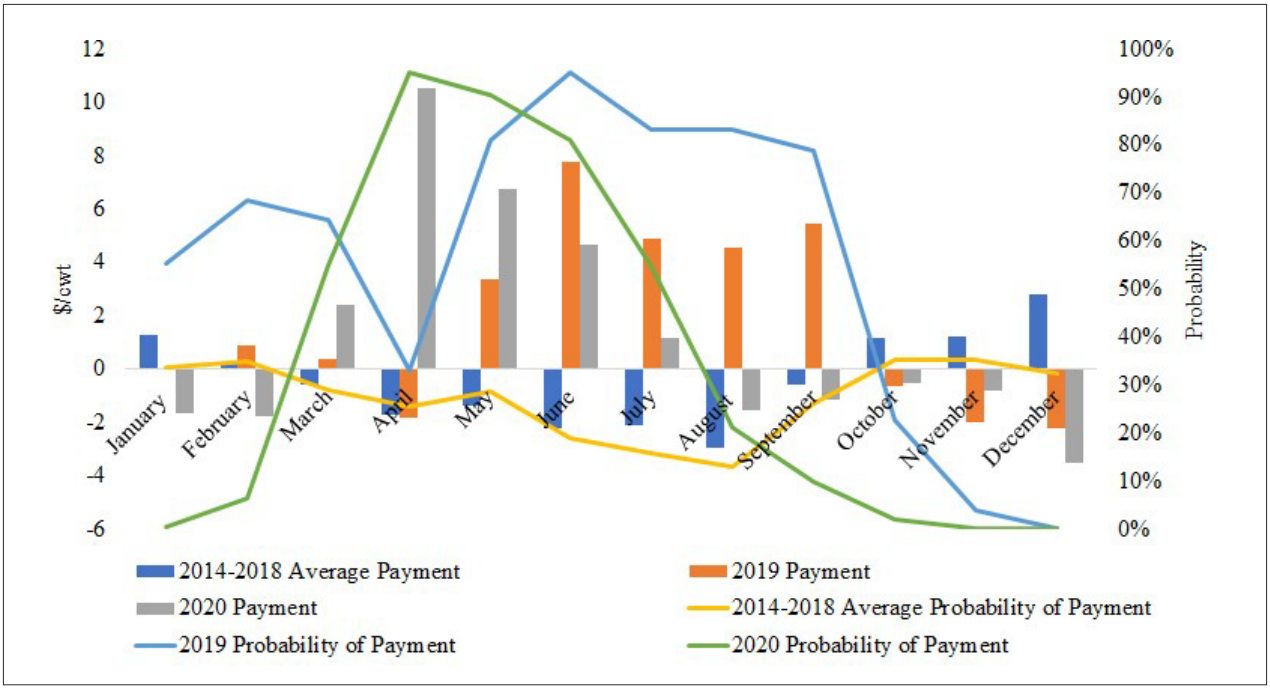

Figure 5. Average Monthly Difference in Indemnity and Producer Premium and Probability of Receiving an Indemnity.

Summary

The use of price risk management tools among the producers surveyed in the focus groups is relatively like what would be expected based on usage percentages found in Hill (2015). Options were the leading tool used by these producers at 33 percent. The second most common tool was futures contracts being used by 25 percent of the surveyed producers. LRP and forward contracts rounded out the risk management tools being used 16 percent and 12.5 percent of the time. Hill (2015) found that futures contracts were most used with a rate of 37 percent followed by options at 27 percent and LRP at 7 percent. The difference in our findings versus Hill (2015) may be summed up by one of the focus group participants comments, "We have moved to using more options instead of straight hedges because of the volatility. They seem to be safer from a capital standpoint." There are no clear solutions readily available to address producers' time constraints. Forward contracts typically require the least amount of attention from producers as they simply must agree to the contract terms with the other party involved and then make sure they meet all their obligations. Futures, options and LRP all require producers to allocate time to monitoring the markets and understanding how these risk management tools work. They must actively plan management decisions and determine risk management goals in advance to determine which tool works best for them. Another challenge was a lack of understanding of how to use them. There are abundant amounts of agricultural extension publications available that attempt to provide educational resources for producers. However, because producers are still experiencing this challenge, perhaps more investigation into the effectiveness of these educational materials needs to be conducted. There are several questions that may need to be answered. Are producers aware of these educational tools? Are producers willing to take the time to learn about and apply these tools? How can price risk management options be simplified?

Based on producer feedback, one reason for nonuse of price risk management is that producers focus on production goals and operational costs, declining to devote resources to price risk management, which may be unnecessarily exposing their operations to high levels of risk. It may be necessary to help producers understand the importance of utilizing all their available resources to maintain profitability in their operation, which is key to the long-term sustainability of the beef industry. Efforts should be made to promote the importance of incorporating price risk management strategies into agricultural operations. Price risk management in conjunction with quality genetics, proper animal health practices, superior nutrition and environmental stewardship can help build resilience into beef cattle operations.

Another concern from producers was the cost of using these risk management tools such as the margin and maintenance fees with futures contracts, option premiums and LRP insurance premiums. Futures and options are also exposed to basis risk. This created fear of cash flow problems from using price risk management tools. There was also fear of losing money due to not understanding these methods of risk management or missing out on potential revenue gains from positive market fluctuations. Producers must determine what their most important goals are in practicing price risk management. Producers may ask themselves if they want the most flexible alternative, the most cost-effective alternative, the most consistent alternative, or the alternative with the greatest potential return. Furthermore, they may need to more explicitly define their profitability goals for the operation. It is common for a person's profit goal to be "all I can get," which is not specific. Most anyone in business wants as much profit as he or she can obtain. However, a specific profit goal ($/head, $/load) can assist with determining what prices are acceptable when managing price risk.

Table 1 (next page) contains a summary of attributes that lead to use and non-use of price risk management tools by cattle producers, though it is not an exhaustive list. For example, futures contracts can provide producers the most consistent risk management and some flexibility. They are more liquid than LRP as they can be offset any time before expiration, allowing producers to remove the hedge if they choose. Futures contracts have been shown to be the most consistent option to eliminate variability in returns. The downside to futures contracts is they may not be effective for smaller producers if they do not have enough cattle to meet the quantity specification, resulting in them being over hedged. They are also commonly the most capital intensive risk management strategy due to maintenance and margin requirements. Options provide many beneficial attributes to producers. They have the flexibility to be offset at any time just like futures contracts. They are also more cost effective as they only require the premium payment. Furthermore, they do not limit producers from taking advantage of positive changes in market conditions. Producers still must be concerned about basis risk and over hedging just as they would be with futures contracts.

LRP insurance also offers producers flexibility in its own way through multiple contract lengths and coverage rates. Where LRP is not flexible is it does not allow producers to offset anytime they want. Indemnity payment calculations are made based on the date the insurance expires. LRP is structured to better serve smaller producers as it will allow them to insure as few as one animal. Another benefit of LRP is that it allows producers to take advantage of favorable changes in market conditions unlike futures contracts, allowing producers the chance to capture the greatest possible levels of return. Some producers also find LRP easier to understand because they deal with an insurance agent instead of a commodity broker. While LRP insurance has been useful to many producers, it remains the least used price risk management tool.

Based on these findings, efforts should be made to reduce producers' fear and confusion of risk management options. The authors have found one-on-one consultation with producers is an effective method to educate producers about price risk management and to reduce their fears of using the available tools. Producers would prefer to have an adviser, someone other than their broker, for price risk management. It is similar to having a financial adviser when making investment decisions or an accountant for tax preparation. More simply stated, many producers want to know exactly how a certain strategy can apply to their specific situation and what it means for their profit line.

Table 1. Summary of attributes leading to use or non-use of price risk management tools by cattle producers.

	Positive attributes	Attributes leading to non-use
Futures	• Can be used to lock in a profit • Initial cost is only commission • Can exit position at any time	• Subject to large margin calls and thus capital intensive • Does not allow for gains if the price moves in an advantageous direction • Difficult to understand how the local cash price corresponds to the futures price (basis) • Contracts are not available for every month • Contracts for feeder cattle are too large for producers selling less than 50,000 pounds
Options	• Provides upside price potential when selling (i.e. put option) and downside price potential when buying (i.e. call option) • Flexible from the aspect that the position can be exited at any time • Can offset some costs with advanced methods	• Expensive way of setting price floor or ceiling • Difficult to understand how the local cash price corresponds to the futures price (basis) • Contracts are not available for every month • Contracts for feeder cattle are too large for producers selling less than 50,000 pounds
LRP	• Idea of insurance is easy to understand • Exact value being protected is known and at an exact cost • Contract size is flexible • Contracts can be purchased for every month	• Lacks flexibility in that the position cannot be exited after purchase • Difficult to obtain contract on the specific day cattle will be marketed • Expensive method of setting price floor

Companion Publications

Griffith, A.P., C.N. Boyer, I. Kane. 2022. Summary: Price Risk Management Contributions to Economic Sustainability in the Cattle Industry. University of Tennessee Extension Publication W 1097-A.

Griffith, A.P., C.N. Boyer, I. Kane. 2022. Literature Review: Price Risk Management Contributions to Economic Sustainability in the Cattle Industry. University of Tennessee Extension Publication W 1097-B.

Acknowledgement

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