



Insurance options help Bell Livestock manage price risk

Carbon County's Bell Livestock runs 300 cow-calf pairs and, for the last four years, has retained ownership of its steer calves. Owners Norm and Belinda Bell plan to do the same this year with their 155 steers at a central Nebraska feedlot. Because of the southern drought, the Bells are concerned that volatility in fat cattle and feed prices may affect profitability. They recently met with their crop insurance agent to discuss risk management alternatives and have several options to evaluate:

1. Do nothing. While it may not seem like much of an option, doing nothing might work for the Bells, as long as feed prices and cattle prices hold steady or increase.
2. Purchase a Livestock Risk Protection (LRP) policy.
3. Take advantage of Livestock Gross Margin (LGM) insurance.

4. Prepay the feed bill.
5. Use the futures market.

Livestock Risk Protection

LRP policies protect against price declines for a wide range of cattle producers. The Bells would need to select a contract length for their production period along with cattle type, number of head, and expected weight at sale time (up to 900 pounds for feeder cattle; 1,000 to 1,400 pounds for fed cattle). A Chicago Mercantile Exchange (CME) price index determines the price used to calculate the insured value. Indemnities occur if the revenue determined by CME prices at sale time is below the insured value.

The Bells plan to wean 600-pound steer calves in mid-October. Previously sold steers have consistently averaged a 3-pound-per-day gain on feed from weaning to fat



Table 1. Bell Livestock available LRP coverage.

Ending cattle weights	Policy length	Beginning coverage price (per cwt)	Coverage level	Actual coverage price	Total insurance coverage	Premium rate	Premium cost (with 13% subsidy)	Premium cost (per cwt)
1,300 pounds	34	\$126.58	0.98	\$124.05	\$249,957.53	0.052	\$11,364.84	\$5.64
		\$126.58	0.95	\$120.25	\$242,305.77	0.037	\$7,819.43	\$3.88
		\$126.58	0.92	\$116.45	\$234,654.00	0.025	\$5,129.65	\$2.55
		\$126.58	0.9	\$113.92	\$229,552.83	0.020	\$4,069.51	\$2.02

weight, finishing at approximately 1,300 pounds. The contract length would be 34 weeks (234 days on feed with the 34-week contract being the closest available match).

The Bells’ insurance agent determined the available coverage price for their 34-week contract was \$126.58 per cwt, and he offered them coverage from 90 to 98 percent (Table 1). LRP premiums

are subsidized at 13 percent. Coverage price was multiplied by 155 head and 13 cwt to yield the coverage’s total dollar amount.

LRP would allow the Bells to lock-in a favorable price for a relatively low cost. The LRP premium is a one-time, fixed cost that allows owners to take advantage of price increases in the cash market as they are only responsible for the up-front premium payment. If the Bells’ cattle are of a value-added

Table 2. Bell Livestock Livestock Gross Margin policy example.

June marketings (# head)	Expected gross margin	Expected total gross margin	Deductible (\$20 per head, 155 head)	Gross margin guarantee	Liability level (\$98.19 per cwt)	Total premium cost	Premium cost per head
155	\$266.08	\$41,242.40	\$3,100.00	\$38,142.40	\$175,023.68	\$7,761.00	\$50.07

variety able to top market prices, they also may receive an indemnity payment and still beat the insurance or market price.

Livestock Gross Margin insurance

LGM insurance addresses the two main risks in feeding cattle – cattle prices and feed costs. LGM insures against margin losses associated with feed costs, in addition to fed cattle prices. These contracts are essentially a bundle of feeder cattle, fed cattle, and corn options that are non-exercisable; the Risk Management Agency (RMA) essentially assumes the margin risk. Contracts are available for either calf finishing or yearling finishing. Calf contracts assume calves enter the feedlot at 550 pounds and exit at 1,150 pounds and that 52 bushels of corn are consumed for up to 11 months.

Prices used to calculate the gross margin guarantee are determined by end-of-the-month live cattle, feeder cattle, and corn contract prices from the CME. Indemnities are paid when the actual gross margin is less than the gross margin guarantee. Prices for fed cattle, feeder cattle, and corn are calculated for each month using rolling CME prices.

As with LRP, the Bells’ LGM contract length would be 34 weeks, starting in October. The Bells would use a calf-finishing contract, with June as their marketing month. The expected gross margin per head for June is \$266.08 (Table 2). By selecting a deductible of \$20 per head (deductibles range from \$10 to \$100 in \$10 increments), their total deductible would be \$3,100. This amount would be subtracted from the total expected gross margin, resulting in a gross margin guarantee of \$38,142.40. If in June the actual gross margin was less than the gross margin guarantee, an indemnity payment would be made on the difference.

Prepaying feed

The feedlot used by the Bells has offered the option of prepaying feed – locking in the corn price for the feeding period. Prepaying feed is a large up-front cost. At \$6 per bushel, for 52 bushels per head (155 head total), the total cost is \$48,360. However, since the current corn price is \$6.25 per bushel, the Bells would ultimately save \$2,015.

Futures and options markets

The Bells final option for consideration is the futures market. For the Bells, the large up-front cost and the inherent variability of the markets is daunting; however, with any luck the price will decline by the time they buy back the contract in June and they will make money.





Table 3. Comparison of Bell Livestock risk management options.

Strategy	Per cwt cost/ premium cost	Total premium/ strategy cost	Downside cattle price risk protection	Feed cost protection
No risk management	\$0.00	\$0	No	No
LRP contract	\$5.64	\$11,365	Yes	No
LGM contract	\$4.35	\$7,761	Yes	Yes
Prepay feed	\$24.96	\$48,360	No	Yes
Hedging/futures	\$23.74	\$46,000	Yes	No
Options	\$12.75	\$25,500	Yes	No

The risk in hedging is that the market may drop and cost substantial margin-money to keep the contract. The options market can minimize that margin risk because an option contract gives the producer the option of exercising a futures contract at a certain price for a premium paid up front.

In the Bells' case, if the June put option for fat cattle is trading at \$115 per cwt with a premium of \$12.75 per cwt, they would pay \$25,500 for 2,000 cwt (four contracts). If fat cattle prices fall below \$115 per cwt in June, the Bells would exercise the option and use the difference to offset the cash losses.

Table 3 compares the results of the various strategies. While prepaying feed is listed as a cost, this is just for up-front cost comparison. Ideally, prepaying feed should save the Bells money over the feeding period.

After looking at their options, the Bells decided to purchase LGM insurance because this risk

management strategy provides coverage against both declines in cattle price and increases in the cost of feed. The up-front premium offered was reasonable considering the cost of the other options, and there was no potential for cost increases if the market prices rose unexpectedly.

For more information on insurance products, see the RMA website at www.rma.usda.gov. For information on other risk management topics, visit the "Resources" tab at RightRisk.org.

