

Livestock Gross Margin for Cattle Insurance Product to Protect Cattle Feeders from a Drop in Expected Gross Margin

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A Livestock Gross Margin (LGM) insurance policy for cattle has been made available by USDA's Risk Management Agency (RMA) to assist cattle feeders manage financial risk from a drop in expected gross margins (gross income less the cost of calves/feeders and feed). Unlike the Livestock Risk Protection (LRP) policy, which offers cow-calf producers, stocker and backgrounding operators, protection against a decline in feeder and live cattle prices, an LGM policy helps protect against a decline in expected gross margins from either a decline in live cattle futures prices, an increase in the futures price of corn (feed costs), or an increase in feeder cattle prices and/or combination of all three factors.

Two types of enterprises can be insured under LGM - calf finishing, i.e., calves placed directly on feed and yearling finishing, i.e., feeders placed on feed. (Table 1). Weights and amount of corn consumed are set by the policy parameters and cannot be changed. In other words, weights and other costs, including actual feed costs, are not taken into account.

Table 1: Basic LGM Policy Assumptions for Calculating Gross Margin Guarantees			
	Weight Entering Feedlot (lbs)	Finished Weight (lbs)	Amount of Corn Consumed (bu)
Calf Finishing	550	1,150	54.5
Yearling	750	1,250	57.5

Gross Margin

Gross margin is the difference between gross revenue (total revenue from selling finished cattle) and specific variable costs (feed and initial cattle costs). LGM program concept: While the insurance protection concept is relatively easy to understand, details of how all of the variables are combined to provide insurance protection for widely diverse set cattle feeding situation is difficult to

explain. Futures prices for live cattle, feeder cattle and corn are combined with the values in table 1 to calculate an Expected Gross Margin (EGM) for a target month(s) when cattle are planned to be marketed out of the feed yard. The EGM is calculated by determining the gross revenue (finished weight times the expected live cattle futures price) less the starting value of the cattle (starting weight times feeder cattle futures price) less value of the feed to be consumed (amount of corn consumed times the futures price of corn). (See table 2 for basic formulas). All of these values are calculated and approved by the RMA. Closing live cattle, feeder and corn futures prices are adjusted for basis, by state, by basis values, also provided by the RMA.

A potential insurer may adjust the EGM with a deductible (zero to \$150 per head in \$10 increments) to come up with a Gross Margin Guarantee which forms the basis for the policy and the premium. **NOTE:** Actual prices received or paid by a producer in a cattle feeding enterprise are not used in the calculations.

Table 2: Basic Formula for Calculating Expected Gross Margin				
1	2 Calf Finish	3 Yearling Finished	4 ¹ Multiplied	5 ¹ Futures Prices and Basis
End Value	11.5 cwt	12.5 cwt	times	Expected Live Cattle Price + Live Cattle Basis
Less	5.5 cwt	7.5 cwt	times	Expected Feeder Cattle Price + Feeder Cattle Basis
Less	54.5 bu corn	57.5 bu corn	times	Expected Corn Price + Corn Basis
Equals	EGM for Calves	EGM for Yearlings		

¹Calf finish or yearling finish parameters (column 2 or 3) multiplied by futures prices and basis (column 5).

The LGM policy provides insurance for the difference between the Gross Margin Guarantee and the eventual Actual Total Gross Margin based on the producer's target marketings (fed cattle sales by month).

Example

Based on the input parameters (Table 1) and calculation formulas (Table 2), USDA-RMA provides expected and actual gross margins (once the period is completed) to assist producers to make an insurance decision. (See Table 3). The EGMs in table 3 change daily as futures prices change. **NOTE:** LGM cattle insurance policies are only sold monthly. The sales period begins the last business day of the month after RMA validates prices and rates; then the sales period lasts until 9:00 AM CST the following day.

Table 3: LGM Expected and Actual Gross Margin - Report for 2007, TEXAS, CATTLE¹

CATTLE (803) CALF FINISHING (807) JAN. - NOV. INSURANCE PERIOD (901)											
	1	2	3	4	5	6	7	8	9	10	11
Expected Gross Margin	N/A	279.21	266.02	233.22	223.78	259.55	273.11	267.47	233.13	201.84	227.89
Actual Gross Margin	N/A	305.08	N/A	N/A							
CATTLE (803) YEARLING FINISHING (808) JAN. - NOV. INSURANCE PERIOD (901)											
	1	2	3	4	5	6	7	8	9	10	11
Expected Gross Margin	N/A	105.93	203.40	264.50	216.73	197.90	150.70	120.48	114.85	128.30	167.65
Actual Gross Margin	N/A	134.05	N/A	N/A							

¹One of 16 examples on March 8, 2007

From the March 8, 2007, RMA report (Table 3), February's (#2) EGM of \$279.21/unit for Calf Finishing closed with an Actual Gross Margin of \$305.08. Insurers received the EGM from the market and an indemnity was not paid.

To view RMA's LGM Expected and Actual Gross Margin Report, go to <http://www.rma.usda.gov/>, from the menu on left side, select Tools and Calculators, Livestock Reports, LGM Expected and actual Gross Margin, 2007, next, Texas, next, create report.

Assuming that a potential insurer wanted to place steers on feed and was interested in a Calf Finishing policy with August (#8) as the Target month for marketing the finished calves: on March 8, 2007, the EGM for August was estimated at \$267.47/unit with a policy premium of \$40.97/unit. To estimate the premium, go to <http://www.rma.usda.gov/>, select Livestock, Premium Calculation instructions and follow the menus (**NOTE:** New users must establish a file and a password).

Other important LGM program requirements:

- Target marketing: Insurers must list the total number of insured cattle in each month during insurance period.
- Insured person must submit a marketing report showing actual marketings for each month, accompanied by copies of sales receipts.
- Each insurance period for LGM is eleven months long. No cattle can be insured during the first month of any insurance period.
- The maximum number of cattle that can be covered is 5,000 head in any one insurance period and 10,000 head in any insurance year (July 1 through June 30).
- While RMA finances all administrative and overhead costs, the premium is not subsidized.