

**LIVESTOCK GROSS MARGIN (LGM)
LIABILITY/PREMIUM CALCULATIONS**
Edit Description

**Livestock Gross Margin (LGM)
(Insurance Plan Code 82)**

GROSS MARGIN GUARANTEE

$$\begin{aligned}
 \text{EXPECTED GROSS MARGIN} &= (\text{Internal}) \text{ (field 7)} * \text{EXP_GROSS_MARGIN_2} \text{ (field 17)} + \\
 &(\text{TARGET_MARKET_3} * \text{EXP_GROSS_MARGIN_3}) \text{ (field 8)} + (\text{TARGET_MARKET_4} * \\
 &\text{EXP_GROSS_MARGIN_4}) \text{ (field 19)} + (\text{TARGET_MARKET_5} * \text{EXP_GROSS_MARGIN_5}) \text{ (field 10)} + (\text{TARGET_MARKET_6} * \text{EXP_GROSS_MARGIN_6}) \text{ (field 11)} + \\
 &(\text{TARGET_MARKET_7} * \text{EXP_GROSS_MARGIN_7}) \text{ (field 22)} + (\text{TARGET_MARKET_8} * \text{EXP_GROSS_MARGIN_8}) \text{ (field 13)} + (\text{TARGET_MARKET_9} * \text{EXP_GROSS_MARGIN_9}) \text{ (field 14)} + \\
 &(\text{TARGET_MARKET_10} * \text{EXP_GROSS_MARGIN_10}) \text{ (field 25)} + (\text{TARGET_MARKET_11} * \text{EXP_GROSS_MARGIN_11}) \text{ (field 16)} + (\text{field 26})
 \end{aligned}$$

$$\begin{aligned}
 \text{GROSS_MARGIN_GUAR} &= \text{EXPECTED GROSS MARGIN} \text{ (Internal)} - (\text{DEDUCTIBLE} * \\
 &\text{TOTAL TARGET MARKETINGS}) \text{ (Internal)}
 \end{aligned}$$

Note: Gross margin guarantee can be negative.

LIABILITY

FOR CATTLE:

$$\text{LIABILITY} = \text{AVG CME PRICE} \text{ (field 29)} * 12.5 * \text{TOTAL TARGET MARKETINGS} \text{ (Internal)}$$

FOR SWINE:

$$\text{LIABILITY} = \text{AVG CME PRICE} \text{ (field 29)} * .74 * 2.5 * \text{TOTAL TARGET MARKETINGS} \text{ (Internal)}$$

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SIMULATED LOSSES

SIMULATED GROSS MARGINS(i) =
(Internal)

(SECOND MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_2) +
(Internal) (field 7)

(THIRD MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_3) +
(Internal) (field 8)

(FOURTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_4) +
(Internal) (field 9)

(FIFTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_5) +
(Internal) (field 10)

(SIXTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_6) +
(Internal) (field 11)

(SEVENTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_7) +
(Internal) (field 12)

(EIGHTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_8) +
(Internal) (field 13)

(NINTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_9) +
(Internal) (field 14)

(TENTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_10) +
(Internal) (field 15)

(ELEVENTH MONTH GROSS MARGIN DRAW(i) * TARGET_MARKET_11)
(Internal) (field 16)

Note: (i) = 1,2,..., 5000

SIMULATED_LOSSES = \sum (MAX (GROSS_MARGIN_GUAR - SIMULATED GROSS MARGINS(i), 0))
(field 30) (field 28) (Internal)

Note: Negative simulated gross margins will be included.

TOTAL PREMIUM

TOTAL_PREMIUM = 1.03 * (1/5,000) * SIMULATED_LOSSES
(field 31) (field 30)

PRODUCER PREMIUM

PRODUCER_PREMIUM = TOTAL_PREMIUM
(field 37) (field 31)

Note: Subsidy not applicable for LGM.

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Tag	No.	Picture	Rounding	Description
<TARGET_MARKET_2>	7	9(05)	whole number	Number of swine or cattle the insured expects to market in the second month of the insurance period.
<EXP_GROSS_MARGIN_2>	17	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine or cattle for Second Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_3>	8	9(05)	whole number	Number of swine or cattle the insured expects to market in the third month of the insurance period.
<EXP_GROSS_MARGIN_3>	18	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine or cattle for Third Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_4>	9	9(05)	whole number	Number of swine or cattle the insured expects to market in the fourth month of the insurance period.
<EXP_GROSS_MARGIN_4>	19	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine or cattle for Fourth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_5>	10	9(05)	whole number	Number of swine or cattle the insured expects to market in the fifth month of the insurance period.
<EXP_GROSS_MARGIN_5>	20	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine or cattle for Fifth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_6>	11	9(05)	whole number	Number of swine or cattle the insured expects to market in the sixth month of the insurance period.
<EXP_GROSS_MARGIN_6>	21	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine or cattle for Sixth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_7>	12	9(05)	whole number	Number of cattle the insured expects to market in the seventh month of the insurance period. Not applicable for swine.

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Tag	No.	Picture	Rounding	Description
<EXP_GROSS_MARGIN_7>	22	(+ / -) 9999.9999	per ADM	Expected Gross Margin per cattle for Seventh Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
<TARGET_MARKET_8>	13	9(05)	whole number	Number of cattle the insured expects to market in the eighth month of the insurance period. Not applicable for swine.
<EXP_GROSS_MARGIN_8>	23	(+ / -) 9999.9999	per ADM	Expected Gross Margin per cattle for Eighth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
<TARGET_MARKET_9>	14	9(05)	whole number	Number of cattle the insured expects to market in the ninth month of the insurance period. Not applicable for swine.
<EXP_GROSS_MARGIN_9>	24	(+ / -) 9999.9999	per ADM	Expected Gross Margin per cattle for Ninth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
<TARGET_MARKET_10>	15	9(05)	whole number	Number of cattle the insured expects to market in the tenth month of the insurance period. Not applicable for swine.
<EXP_GROSS_MARGIN_10>	25	(+ / -) 9999.9999	per ADM	Expected Gross Margin per cattle for Tenth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
<TARGET_MARKET_11>	16	9(05)	whole number	Number of cattle the insured expects to market in the eleventh month of the insurance period. Not applicable for swine.

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Tag	No.	Picture	Rounding	Description
<EXP_GROSS_MARGIN_11>	26	(+ / -) 9999.9999	per ADM	Expected Gross Margin per cattle for Eleventh Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
EXPECTED GROSS MARGIN	Internal	9(10).99	dollars and cents	Sum of (Target Marketings by month times Expected Gross Margins by month).
<DEDUCTIBLE>	27	9(04)	NA	Deductible submitted.
TOTAL TARGET MARKETINGS	Internal	9(05)	NA	Sum of Target Marketings by month.
<GROSS_MARGIN_GUAR>	28	(+ / -) 9(10).99	dollar and cents	Expected Gross Margin minus (Deductible times Total Target Marketings). Symbols apply and only the negative symbol (-) will appear if applicable.
AVG CME PRICE	Internal	999.99	NA	3-Day Avg CME Cwt Price from ADM L Suffix P.
<LIABILITY>	29	9(10)	nearest whole dollar	For Cattle, result of Avg CME Price times 12.5 (cwt) times Total Target Marketings rounded to the nearest whole dollar. For Swine, result of Avg CME Price times .74 (lean to live conversion factor) times 2.5 (market weight) times Total Target Marketings rounded to the nearest whole dollar.
SECOND MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Second Month Gross Margin Draw from ADM L Suffix C.
THIRD MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Third Month Gross Margin Draw from ADM L Suffix C.
FOURTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Fourth Month Gross Margin Draw from ADM L Suffix C.
FIFTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Fifth Month Gross Margin Draw from ADM L Suffix C.

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SIXTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Sixth Month Gross Margin Draw from ADM L Suffix C.
SEVENTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Seventh Month Gross Margin Draw from ADM L Suffix C. Not applicable for swine.
EIGHTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Eighth Month Gross Margin Draw from ADM L Suffix C. Not applicable for swine.
NINTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Ninth Month Gross Margin Draw from ADM L Suffix C. Not applicable for swine.
TENTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Tenth Month Gross Margin Draw from ADM L Suffix C. Not applicable for swine.
ELEVENTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 9999.99	per ADM	Eleventh Month Gross Margin Draw from ADM L Suffix C. Not applicable for swine.
SIMULATED GROSS MARGINS(i)	Internal	9(10).99	dollars and cents	Simulated Gross Margins(i) is the sum of (Gross Margin Draws(i) times Target Marketings by month).
<SIMULATED_LOSSES>	30	9(10).99	dollars and cents	Sum of (MAX (Gross Margin Guarantee minus Simulated Gross Margins(i)), 0).
<TOTAL_PREMIUM>	31	9(10)	nearest whole dollar	The result of 1.03 times (1/5,000) times Simulated Losses.
<PRODUCER_PREMIUM>	37	9(10)	nearest whole dollar	Producer Premium equals Total Premium.

Note: (i) = 1,2,...., 5000