

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

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

GROSS MARGIN GUARANTEE

$$\begin{aligned} \text{EXPECTED GROSS MARGIN} &= (\text{TARGET_MARKET_1} * \text{EXP_GROSS_MARGIN_1}) + \\ &\quad (\text{internal}) \qquad \qquad \qquad (\text{field 19}) \qquad \qquad \qquad (\text{field 25}) \\ &+ (\text{TARGET_MARKET_2} * \text{EXP_GROSS_MARGIN_2}) + (\text{TARGET_MARKET_3} * \\ &\quad (\text{field 20}) \qquad \qquad \qquad (\text{field 26}) \qquad \qquad \qquad (\text{field 21}) \\ &+ \text{EXP_GROSS_MARGIN_3}) + (\text{TARGET_MARKET_4} * \text{EXP_GROSS_MARGIN_4}) + \\ &\quad (\text{field 27}) \qquad \qquad \qquad (\text{field 22}) \qquad \qquad \qquad (\text{field 28}) \\ &+ (\text{TARGET_MARKET_5} * \text{EXP_GROSS_MARGIN_5}) + (\text{TARGET_MARKET_6} * \\ &\quad (\text{field 23}) \qquad \qquad \qquad (\text{field 29}) \qquad \qquad \qquad (\text{field 24}) \\ &+ \text{EXP_GROSS_MARGIN_6}) \\ &\quad (\text{field 30}) \\ \text{GROSS_MARGIN_GUAR} &= \text{EXPECTED GROSS MARGIN} * \text{COVERAGE_LEVEL} \\ &\quad (\text{field 32}) \qquad \qquad \qquad (\text{internal}) \qquad \qquad \qquad (\text{field 31}) \end{aligned}$$

LIABILITY

$$\text{LIABILITY} = \text{GROSS_MARGIN_GUAR}$$

(field 33) (field 32)

SIMULATED LOSSES

$$\begin{aligned} \text{SIMULATED GROSS MARGINS}(i) &= (\text{FIRST MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{internal}) \\ &+ \text{TARGET_MARKET_1}) + (\text{SECOND MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{field 19}) \\ &+ \text{TARGET_MARKET_2}) + (\text{THIRD MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{field 20}) \\ &+ \text{TARGET_MARKET_3}) + (\text{FOURTH MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{field 21}) \\ &+ \text{TARGET_MARKET_4}) + (\text{FIFTH MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{field 22}) \\ &+ \text{TARGET_MARKET_5}) + (\text{SIXTH MONTH GROSS MARGIN DRAW}(i) * \\ &\quad (\text{field 23}) \\ &+ \text{TARGET_MARKET_6}) \\ &\quad (\text{field 24}) \end{aligned}$$

Note: (i) = 1,2,..., 25000

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$$\text{SIMULATED_LOSSES} = \sum (\text{MAX} (\text{GROSS_MARGIN_GUAR} - \text{SIMULATED GROSS MARGINS}(i), 0))$$

(field 34) (field 32)

Note: only use simulated gross margins greater than zero in calculation

TOTAL PREMIUM

$$\text{TOTAL_PREMIUM} = 1.03 * (1/25,000) * \text{SIMULATED LOSSES}$$

(field 35) (field 34)

PRODUCER PREMIUM

$$\text{PRODUCER_PREMIUM} = \text{TOTAL_PREMIUM}$$

(field 41) (field 35)

Note: Subsidy not applicable for LGM.

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Tag	No.	Picture	Rounding	Description
<TARGET_MARKET_1>	19	9(05)	whole number	Number of swine the insured expects to market in the first month of the insurance period (Feb. or Aug.).
<EXP_GROSS_MARGIN_1>	25	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for First Month from ADM L Suffix P. This is a signed field. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_2>	20	9(05)	whole number	Number of swine the insured expects to market in the second month of the insurance period (Mar. or Sept.).
<EXP_GROSS_MARGIN_2>	26	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for Second Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_3>	21	9(05)	whole number	Number of swine the insured expects to market in the third month of the insurance period (Apr. or Oct.).
<EXP_GROSS_MARGIN_3>	27	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for Third Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_4>	22	9(05)	whole number	Number of swine the insured expects to market in the fourth month of the insurance period (May or Nov.).
<EXP_GROSS_MARGIN_4>	28	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for Fourth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<TARGET_MARKET_5>	23	9(05)	whole number	Number of swine the insured expects to market in the fifth month of the insurance period (June or Dec.).
<EXP_GROSS_MARGIN_5>	29	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for Fifth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.

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<TARGET_MARKET_6>	24	9(05)	whole number	Number of swine the insured expects to market in the sixth month of the insurance period. (July or Jan.)
<EXP_GROSS_MARGIN_6>	30	(+ / -) 9999.9999	per ADM	Expected Gross Margin per swine for Sixth Month from ADM L Suffix P. Only the negative symbol (-) will appear if applicable.
<EXPECTED GROSS MARGIN>	internal	9(10).99	dollars and cents	Sum of (Target Marketings by month times Expected Gross Margins by month).
<COVERAGE_LEVEL>	31	9.999999	NA	Valid coverage Levels are 0.800000, 0.850000, 0.900000, 0.950000, 1.000000. Within a practice (insurance period) the coverage level is by type without regards to county.
<GROSS_MARGIN_GUAR>	32	9(10).99	dollar and cents	Expected Gross Margin times Coverage Level.
<LIABILITY>	33	9(10)	nearest whole dollar	Gross Margin Guarantee to nearest whole dollar.
FIRST MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	First Month Gross Margin Draw from ADM L Suffix C.
SECOND MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	Second Month Gross Margin Draw from ADM L Suffix C.
THIRD MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	Third Month Gross Margin Draw from ADM L Suffix C.
FOURTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	Fourth Month Gross Margin Draw from ADM L Suffix C.
FIFTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	Fifth Month Gross Margin Draw from ADM L Suffix C.
SIXTH MONTH GROSS MARGIN DRAW(i)	Internal	(+ / -) 999.999	per ADM	Sixth Month Gross Margin Draw from ADM L Suffix C.
SIMULATED GROSS MARGINS(i)	Internal	9(10).99	dollars and cents	Six month Simulated Gross Margins(i) is the sum of (Gross Margin Draws(i) times Target Marketings by month).

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<SIMULATED_LOSSES>	34	9(10).99	dollars and cents	Sum of (MAX (Gross Margin Guarantee minus Simulated Gross Margins(i)), 0).
<TOTAL_PREMIUM>	35	9(10)	nearest whole dollar	The result of 1.03 times (1/25,000) times Simulated Losses.
<PRODUCER_PREMIUM>	41	9(10)	nearest whole dollar	Producer Premium equals Total Premium.

Note: (i) = 1,2,..., 25000