

Livestock Gross Margin (LGM)
(Insurance Plan Code 82)
(Cattle and Swine)

TOTAL GROSS MARGIN (ACTUAL)

$$\begin{aligned}
 \text{TOT_GROSS_MARGIN} = & ((\text{TARGET MARKET 2} * \text{ACT_GROSS_MARGIN_2}) + \\
 & \text{(field 23)} \qquad \qquad \text{(Internal)} \qquad \qquad \text{(field 13)} + \\
 & (\text{TARGET MARKET 3} * \text{ACT_GROSS_MARGIN_3}) + (\text{TARGET MARKET 4} * \\
 & \text{(Internal)} \qquad \qquad \text{(field 14)} \qquad \qquad \text{(Internal)} \\
 & \text{ACT_GROSS_MARGIN_4}) + (\text{TARGET MARKET 5} * \text{ACT_GROSS_MARGIN_5}) + \\
 & \text{(field 15)} \qquad \qquad \text{(Internal)} \qquad \qquad \text{(field 16)} + \\
 & (\text{TARGET MARKET 6} * \text{ACT_GROSS_MARGIN_6}) + (\text{TARGET MARKET 7} * \\
 & \text{(Internal)} \qquad \qquad \text{(field 17)} \qquad \qquad \text{(Internal)} \\
 & \text{ACT_GROSS_MARGIN_7}) + (\text{TARGET MARKET 8} * \text{ACT_GROSS_MARGIN_8}) + \\
 & \text{(field 18)} \qquad \qquad \text{(Internal)} \qquad \qquad \text{(field 19)} + \\
 & (\text{TARGET MARKET 9} * \text{ACT_GROSS_MARGIN_9}) + (\text{TARGET MARKET 10} * \\
 & \text{(Internal)} \qquad \qquad \text{(field 20)} \qquad \qquad \text{(Internal)} \\
 & \text{ACT_GROSS_MARGIN_10}) + (\text{TARGET MARKET 11} * \text{ACT_GROSS_MARGIN_11})) \\
 & \text{(field 21)} \qquad \qquad \text{(Internal)} \qquad \qquad \text{(field 22)}
 \end{aligned}$$

MARKET FACTOR and ADJUSTED INDEMNITY FLAG

$$\begin{aligned}
 \text{MARKET FACTOR} = & \text{TOT_ACTUAL_MARKET} / \text{TOT TARGET MARKET} \\
 & \text{(Internal)} \qquad \qquad \text{(field 12)} \qquad \qquad \text{(Internal)} \\
 & \text{(Note)}
 \end{aligned}$$

Note: If Market Factor < .750 set Adjusted Indemnity Flag (field 24) to 'Y'; else, default Market Factor to 1.000 and set Adjusted Indemnity Flag to 'N'.

INDEMNITY

$$\begin{aligned}
 \text{INDEMNITY_AMOUNT} = & (\text{GROSS MARGIN GUAR} - \text{TOT_GROSS_MARGIN}) * \text{MARKET FACTOR} \\
 & \text{(field 25)} \qquad \qquad \text{(Internal)} \qquad \qquad \text{(field 23)} \qquad \qquad \text{(Internal)}
 \end{aligned}$$

$$\begin{aligned}
 \text{INDEMNITY_REDUCT} = & 1.000 - \text{MARKET FACTOR} \\
 & \text{(field 26)}
 \end{aligned}$$

Note: An indemnity is calculated and payable if Total Gross Margin is less than Gross Margin Guarantee.

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

Tag	No.	Picture	Rounding	Description
TARGET MARKET 2	Internal	9(06)	whole number	Target Marketings for Second Month reported on premium for swine or cattle.
<ACT_GROSS_MARGIN_2>	13	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per swine or cattle for Second Month from A00600. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 3	Internal	9(06)	whole number	Target Marketings for Third Month reported on premium for swine or cattle.
<ACT_GROSS_MARGIN_3>	14	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per swine or cattle for Third Month from A00600. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 4	Internal	9(06)	whole number	Target Marketings for Fourth Month reported on premium for swine or cattle.
<ACT_GROSS_MARGIN_4>	15	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per swine or cattle for Fourth Month from A00600. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 5	Internal	9(06)	whole number	Target Marketings for Fifth Month reported on premium for swine or cattle.
<ACT_GROSS_MARGIN_5>	16	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per swine or cattle for Fifth Month from A00600. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 6	Internal	9(06)	whole number	Target Marketings for Sixth Month reported on premium for swine or cattle.
<ACT_GROSS_MARGIN_6>	17	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per swine or cattle for Sixth Month from A00600. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 7	Internal	9(06)	whole number	Target Marketings for Seventh Month reported on premium for cattle. Not applicable for swine.
<ACT_GROSS_MARGIN_7>	18	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per cattle for Seventh Month from A00600. Only the negative symbol (-) will appear if applicable. Not applicable for swine.

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

Tag	No.	Picture	Rounding	Description
TARGET MARKET 8	Internal	9(06)	whole number	Target Marketings for Eighth Month reported on premium for cattle. Not applicable for swine.
<ACT_GROSS_MARGIN_8>	19	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per cattle for Eighth Month from A00600. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
TARGET MARKET 9	Internal	9(06)	whole number	Target Marketings for Ninth Month reported on premium for cattle. Not applicable for swine.
<ACT_GROSS_MARGIN_9>	20	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per cattle for Ninth Month from A00600. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
TARGET MARKET 10	Internal	9(06)	whole number	Target Marketings for Tenth Month reported on premium for cattle. Not applicable for swine.
<ACT_GROSS_MARGIN_10>	21	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per cattle for Tenth Month from A00600. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
TARGET MARKET 11	Internal	9(06)	whole number	Target Marketings for Eleventh Month reported on premium for cattle. Not applicable for swine.
<ACT_GROSS_MARGIN_11>	22	(+ / -) 9(08).9999	per ADM	Actual Gross Margin per cattle for Eleventh Month from A00600. Only the negative symbol (-) will appear if applicable. Not applicable for swine.
<TOT_GROSS_MARGIN>	23	(+ / -) 9(10)	whole number	Sum of (Target Marketings by month times Actual Gross Margin by month) for the insurance period. Only the negative symbol (-) will appear if applicable.
<TOT_ACTUAL_MARKET>	12	9(06)	whole number	Total of Actual Marketings for insurance period.
TOT TARGET MARKET	Internal	9(06)	whole number	Total of Target Marketings for insurance period reported on premium.

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

Tag	No.	Picture	Rounding	Description
MARKET FACTOR	Internal	9.999	3 decimal places	Result of (Total Actual Marketings divided by Total Target Marketings) if less than .750, else default to 1.000.
GROSS MARGIN GUAR	Internal	9(10)	whole number	Gross Margin Guarantee for insurance period reported on premium.
<INDEMNITY_AMOUNT>	25	9(10)	whole number	Indemnity is the result of (Gross Margin Guarantee – Total Gross Margin) times Market Factor. Will be zero if total actual marketings is zero.
<INDEMNITY_REDUCT>	26	9.999	3 decimal places	Indemnity Reduction factor is the result of (1.000 – Market Factor).

Note: An indemnity is calculated and payable if Total Gross Margin is less than Gross Margin Guarantee.

Exhibit 140-3
LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS
 Edit Description

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

ACTUAL FEED COST

ACTUAL FEED COST 2 = (CORN EQUIVALENT 2 * (2000/56) * CORN PRICE 2)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 2 * SOYBEAN MEAL PRICE 2)
 (Internal) (Internal)

ACTUAL FEED COST 3 = (CORN EQUIVALENT 3 * (2000/56) * CORN PRICE 3)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 3 * SOYBEAN MEAL PRICE 3)
 (Internal) (Internal)

ACTUAL FEED COST 4 = (CORN EQUIVALENT 4 * (2000/56) * CORN PRICE 4)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 4 * SOYBEAN MEAL PRICE 4)
 (Internal) (Internal)

ACTUAL FEED COST 5 = (CORN EQUIVALENT 5 * (2000/56) * CORN PRICE 5)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 5 * SOYBEAN MEAL PRICE 5)
 (Internal) (Internal)

ACTUAL FEED COST 6 = (CORN EQUIVALENT 6 * (2000/56) * CORN PRICE 6)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 6 * SOYBEAN MEAL PRICE 6)
 (Internal) (Internal)

ACTUAL FEED COST 7 = (CORN EQUIVALENT 7 * (2000/56) * CORN PRICE 7)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 7 * SOYBEAN MEAL PRICE 7)
 (Internal) (Internal)

ACTUAL FEED COST 8 = (CORN EQUIVALENT 8 * (2000/56) * CORN PRICE 8)
 (Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 8 * SOYBEAN MEAL PRICE 8)
 (Internal) (Internal)

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

ACTUAL FEED COST 9 = (CORN EQUIVALENT 9 * (2000/56) * CORN PRICE 9)
(Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 9 * SOYBEAN MEAL PRICE 9)
(Internal) (Internal)

ACTUAL FEED COST 10 = (CORN EQUIVALENT 10 * (2000/56) * CORN PRICE 10)
(Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 10 * SOYBEAN MEAL PRICE 10)
(Internal) (Internal)

ACTUAL FEED COST 11 = (CORN EQUIVALENT 11 * (2000/56) * CORN PRICE 11)
(Internal) (Internal) (Internal)

+ (SOYBEAN MEAL EQUIVALENT 11 * SOYBEAN MEAL PRICE 11)
(Internal) (Internal)

GROSS MARGIN GUARANTEE

ACT_GROSS_MARGIN_2 = TARGET MARKET 2 * MILK PRICE - ACTUAL FEED COST 2
(field 13) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_3 = TARGET MARKET 3 * MILK PRICE 3 - ACTUAL FEED COST 3
(field 14) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_4 = TARGET MARKET 4 * MILK PRICE 4 - ACTUAL FEED COST 4
(field 15) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_5 = TARGET MARKET 5 * MILK PRICE 5 - ACTUAL FEED COST 5
(field 16) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_6 = TARGET MARKET 6 * MILK PRICE 6 - ACTUAL FEED COST 6
(field 17) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_7 = TARGET MARKET 7 * MILK PRICE 7 - ACTUAL FEED COST 7
(field 18) (Internal) (Internal) (Internal)

- ACTUAL FEED COST 7
(Internal)

ACT_GROSS_MARGIN_8 = TARGET MARKET 8 * MILK PRICE 8 - ACTUAL FEED COST 8
(field 19) (Internal) (Internal) (Internal)

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

ACT_GROSS_MARGIN_9 = TARGET MARKET 9 * MILK PRICE 9 - ACTUAL FEED COST 9
(field 20) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_10 = TARGET MARKET 10 * MILK PRICE 10 - ACTUAL FEED COST 10
(field 21) (Internal) (Internal) (Internal)

ACT_GROSS_MARGIN_11 = TARGET MARKET 11 * MILK PRICE 11 - ACTUAL FEED COST 11
(field 22) (Internal) (Internal) (Internal)

TOT_GROSS_MARGIN = Σ (ACT_GROSS_MARGIN 2 thru 11)
(field 23)

MARKET FACTOR and ADJUSTED INDEMNITY FLAG

MARKET FACTOR = TOT_ACTUAL_MARKET / TOT TARGET MARKET
(Internal) (field 12) (Internal)
(Note)

Note: If Market Factor < .750 set Adjusted Indemnity Flag (field 24) to 'Y'; else, default Market Factor to 1.000 and set Adjusted Indemnity Flag to 'N'.

INDEMNITY

INDEMNITY_AMOUNT = (GROSS MARGIN GUAR - TOT_GROSS_MARGIN) * MARKET FACTOR
(field 25) (Internal) (field 23) (Internal)

INDEMNITY_REDUCT = 1.000 - MARKET FACTOR
(field 26)

Note: An indemnity is calculated and payable if Total Gross Margin is less than Gross Margin Guarantee.

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

Tag	No.	Picture	Rounding	Description
CORN PRICE (2 thru 11)	Internal	999.99	per ADM	From A00600.
SOYBEAN MEAL PRICE (2 thru 11)	Internal	999.99	per ADM	From A00600.
CORN EQUIVALENT (2 thru 11)	Internal	9999.9(06)	NA	Corn or corn equivalent in tons that was reported for premium by month for the insurance period.
SOYBEAN MEAL EQUIVALENT (2 thru 11)	Internal	9999.9(06)	NA	Soybean meal or soybean meal equivalent in tons that was reported for premium by month for the insurance period.
ACTUAL FEED COST (2 thru 11)	Internal	(+ / -) 9999.99	dollars and cents	Actual Feed Cost is the result of (corn equivalent times (2000/56) times corn price) plus (soybean meal equivalent times soybean meal price) by month.
MILK PRICE (2 thru 11)	Internal	999.99	per ADM	From A00600.
TARGET MARKET 2	Internal	9(06)	whole number	Target Marketings for Second Month reported on premium for dairy.
<ACT_GROSS_MARGIN_2>	13	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the second month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 3	Internal	9(06)	whole number	Target Marketings for Third Month reported on premium for dairy.
<ACT_GROSS_MARGIN_3>	14	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the third month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 4	Internal	9(06)	whole number	Target Marketings for Fourth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_4>	15	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the fourth month. Only the negative symbol (-) will appear if applicable.

Exhibit 140-3
LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS
 Edit Description

Tag	No.	Picture	Rounding	Description
TARGET MARKET 5	Internal	9(06)	whole number	Target Marketings for Fifth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_5>	16	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the fifth month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 6	Internal	9(06)	whole number	Target Marketings for Sixth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_6>	17	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the sixth month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 7	Internal	9(06)	whole number	Target Marketings for Seventh Month reported on premium for dairy.
<ACT_GROSS_MARGIN_7>	18	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the seventh month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 8	-Internal	9(06)	whole number	Target Marketings for Eighth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_8>	19	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the eighth month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 9	-Internal	9(06)	whole number	Target Marketings for Ninth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_9>	20	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the ninth month. Only the negative symbol (-) will appear if applicable.

**LIVESTOCK GROSS MARGIN (LGM)
INDEMNITY CALCULATIONS**
Edit Description

Tag	No.	Picture	Rounding	Description
TARGET MARKET 10	Internal	9(06)	whole number	Target Marketings for Tenth Month reported on premium for dairy.
<ACT_GROSS_MARGIN_10>	21	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the tenth month. Only the negative symbol (-) will appear if applicable.
TARGET MARKET 11	-Internal	9(06)	whole number	Target Marketings for Eleventh Month reported on premium for dairy.
<ACT_GROSS_MARGIN_11>	22	(+ / -) 9(08).9999	dollars and cents	Actual Gross Margin for dairy is the result of target marketings times milk price minus actual feed cost for the eleventh month. Only the negative symbol (-) will appear if applicable.
<TOT_GROSS_MARGIN>	23	(+ / -) 9(10)	whole number	Sum of actual gross margin by month for the insurance period. Only the negative symbol (-) will appear if applicable.
<TOT_ACTUAL_MARKET>	12	9(06)	whole number	Total of Actual Marketings for insurance period.
TOT TARGET MARKET	Internal	9(06)	whole number	Total of Target Marketings for insurance period reported on premium.
MARKET FACTOR	Internal	9.999	3 decimal places	Result of (Total Actual Marketings divided by Total Target Marketings) if less than .750, else default to 1.000.
GROSS MARGIN GUAR	Internal	9(10)	whole number	Gross Margin Guarantee for insurance period reported on premium.
<INDEMNITY_AMOUNT>	25	9(10)	whole number	Indemnity is the result of (Gross Margin Guarantee – Total Gross Margin) times Market Factor. Will be zero if total actual marketings is zero.
<INDEMNITY_REDUCT>	26	9.999	3 decimal places	Indemnity Reduction factor is the result of (1.000 – Market Factor).

Note: An indemnity is calculated and payable if Total Gross Margin is less than Gross Margin Guarantee.