Hedge Accounting

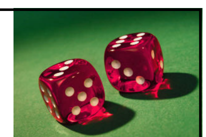
FBS 2013 USER CONFERENCE

Purpose of a Hedge

- *Provide a change in value of the hedging instrument in the opposite direction of the hedged item.*
- For tax purposes, the gains or losses on from hedging activities are recognized when hedges are lifted
- For accounting purposes, hedging gains/losses are recognized in the period the gains or losses occur
  - Hedging is consider normal business operation so should be matched to gross revenue and expense

What is Hedging?

- Hedging is a risk management strategy that attempts to offset price movements of owned assets, planned production of a commodity or good, or planned purchases of commodity or good against a derivative instrument (which generally derives its value from an underlying physical commodity).
- It is not an attempt to make money in the futures and options markets, but rather an attempt to offset price changes in the cash market, thereby protecting the producers net income.



What is Not Hedging?

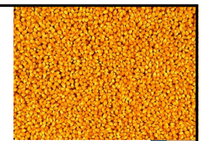
- Speculation
  - Taking a futures or options position in a commodity not owned or produced.
  - Taking the same position in the futures or options market as exists (or will exist) on the farm.
- Forward contracts
  - Fixed price, delayed or deferred price contracts, basis contracts, installment sale contracts, etc.

Tax Purposes

- May be different from GAAP
- An agricultural producer normally reports hedging gains or losses when the hedge is closed (similar to GAAP).
- However, if the producer meets certain requirements, they can elect to report all hedging gains and losses on a mark-to-market basis (i.e. usually pick up the 1099 reported net gain or loss).
  - This simplified method allows producers to simply report the gains and losses from the Broker's statement form 1099B.
  - Care must be taken in reviewing form 1099B from brokerage companies if options are used since many brokers will show a purchase of an option as a realized loss and any outstanding option value at year-end as unrealized gain.
  - This may result in reported gains or losses that are materially different from actual gains or losses.

Hedging Types and Treatment

- Three types of hedges
  - Fair value
  - Cash flow
  - Net investment hedge/Foreign currency transactions
- Financial Statement treatment
  - Income Statement -- depends on the hedging type. May be included in net income or may be excluded from net income.
  - Balance Sheet -- No difference in presentation between the two methods.



Fair Value Hedges

- …used to protect the exposure to market value changes of an asset or a liability. For agricultural producers this generally refers to stored crop inventory.
- If crops are valued at market then the underlying hedge is marked-to-market and the gain or loss is included in net income for the period. In other words, gains and losses are realized with respect to net income.

Cash Flow Hedges

- …used to reduce the risk of price fluctuations of forecasted transactions. For agricultural producers this generally refers to items that are growing, being raised, unfinished, or yet to be produced. Examples: growing crops, future crops, or livestock that is being raised or will be raised. This could also refer to the future purchase of inputs including feed.
- The gain or loss associated with this type of hedge is not included in net income. Instead, they are recognized as "Other Comprehensive Income" and are reported after net income on the Income Statement or in a separate statement called the Statement of Comprehensive Income. In other words, gains and losses are not realized with respect to net income, but are realized with respect to other comprehensive income.

FFSC Recommendations

- GAAP
  - Recommended approach
  - Separate hedging gains and losses between earned (in the body of the Income Statement) and unearned (at the end of the Income Statement or on a separate statement).
- Alternative
  - Simplified method may be used
  - Ignore distinction between earned and unearned and include all hedging gains and losses in earnings.

Fair Value Hedge Approach

- Hedging transactions are considered fair value hedges when the underlying asset being hedged is available for sale or is valued on the balance sheet at its fair (or market) value. In this case, the hedging transactions are marked-to-market as of the date of financial statement and any resulting gains or losses are recognized with respect to net income and reported on the Income Statement as hedging gains/losses.
- If the hedged item is normally sold in the course of business, then the hedging gain or loss should be reported in the revenue section of the income statement. On the other hand, if the hedged item is normally purchased in the course of business then the hedging gain or loss should be reported in the expense section of the income statement. (Generally hedged purchases are cash flow hedges, but if the purchased items, for instance feed, is valued at market, then the unrealized hedging gain or loss should be included with expenses and therefore will be included in net income).

Cash Flow Hedge Approach

- A simple way to think of cash flow hedges is to consider the gains and losses flowing to valuation equity. Technically the gains and losses are accumulated in the equity section of the balance sheet in an account titled accumulated other comprehensive income. Accordingly, all these unrealized gains and losses are considered unrecognized with respect to net income (i.e., they are not included in net income).
- As these unrealized gains and losses are offset, previous accumulated gains or losses are removed from other comprehensive income and are reclassified in net income, which has the impact of moving the gain or loss in the equity section of the balance sheet from accumulated other comprehensive income to retaining earnings.

Alternative Approach

- The simplified method of accounting for hedges treats all hedges as fair value, thus all hedging gains and losses are marked-to-market and recognized on the Income Statement.
- No distinction between hedges of commodities on hand (fair value) vs. planned or in-process production (cash flow) disappears with this approach.

Tax Treatment

- Hedging transactions
  - Treated as ordinary income or expense and reported on schedule F.
  - Detailed rules and documentation requirements must be met to qualify a futures transaction as a hedge.
  - Generally, for cash-basis tax payers, only the gains or losses from closed hedging transactions are recognized in taxable income, and this is almost always different from the amount of gains or losses recognized from an accounting perspective. IRS guidelines suggest showing all gains and losses in Schedule F "Other income."

Tax Treatment, cont.

- Speculative transactions
  - Treated as capital gains and losses.
  - Any futures transaction that doesn't meet the hedging rules is consider a speculative transaction, and capital gains and losses are reported on Form 6781 "Section 1256 Contracts and Straddles" which flows to schedule D. Capital gains may result in a favorable tax rate; however, capital losses can be limited to only $3,000 per year or may, in some cases, be carried back to prior years to offset net Section 1256 gains reported in those years.

Summary

- Gain and losses from hedging transactions may be significant items for an agricultural producer. Proper treatment and presentation in the financial statements are important to be sure earnings are measured accurately.
- The recommended approach is to:
  - Treat hedging transactions as fair value hedges when inventories are valued at market (stored grain or livestock available for sale). This treatment has the impact of showing in net income the gain and losses from hedging transactions.
  - Treat hedging transactions as cash flow hedges when inventories are value at cost (growing crops or livestock) or production is planned (has not begun). This treatment has the impact of showing in other comprehensive income the gain and losses from hedging transactions, and keeping these amounts out of net income.

Definitions

- **Realized gains or losses from hedging** – are computed based on closed hedging transactions.
  - Realized gains and losses appear in a brokerage statement's closed equity position.
- **Recognized gains or losses from hedging** – are the amounts that flow through the income statement or statement of comprehensive income whether resulting from realized or unrealized gains or losses.

Definitions (Continued)

- **Unrealized gains or losses from hedging** – are based on the **mark-to-market** rules and value hedging transactions as of the date of the financial statement.
  - Appear in a brokerage statement's open equity position
  - May be **recognized** as Other Comprehensive Income but not Net Income in respect to Cash Flow Hedges

Definitions (Continued)

- **Other comprehensive income (OCI)** – is **unrecognized** income that falls outside the scope of net income, and is considered part of an entity's total comprehensive income.
  - Includes the **unrealized** gains or losses from cash flow hedges that will at some point in the future be reclassified into net income.

Definitions (Continued)

- **Accumulated other comprehensive income (AOCI)** – is the accumulated amount of OCI until reclassified into retained earnings (via the income statement).
  - Unrealized gains and losses are accumulated here for cash flow hedges until the hedged commodity is either sold or priced (and/or the hedge is lifted).

Recognized/Realized Recap

	Recognized	Realized
Tax Treatment		
Accrual Treatment		

Recognized/Realized Recap 2

	Recognized	Realized
Fair Value		
Cash Flow		

Definitions (Continued)

Effective Hedge – In order to use Cash Flow hedging, the hedge must be effective (80/125%). Effective Hedges can flow through OCI

Ineffective Hedge – If the hedge is ineffective, it must flow through net income. You can elect to have all hedges be ineffective and flow all through net income

Types of Hedges

- Fair Value Hedge
  - Used to offset changes in the fair value of items with fixed prices
- Cash Flow Hedge
  - Used to establish a fixed price when future cash flows could vary due to changes In prices

Hedge Flow Chart

Fair Value Hedge

- All gains or losses, whether realized or unrealized flow through net income.

Cash Flow Hedge

- Unrealized gains or losses flow into OCI.
- When hedge is lifted or converted to fair value, realized gain/loss is reflected in net income.
- Accumulated unrealized gain or loss is reclassified to net income

Cash Flow Hedge Example

- Go short 5,000 corn futures at $5.65 on March 1, 2013.
- Value on March 31, 2013 is $5.80, report $750 loss in OCI.
- On June 20, 2013, close futures at $5.25. Realized gain of $2,000 is reported in other comprehensive income.

Cash Flow Hedge Example(Cont.)

- The $750 loss from first quarter is reclassified by showing $750 gain in OCI and $750 loss in net income.
- Net income shows a $2,750 realized gain from closing the hedge.
- Total comprehensive income for quarter is equal to $2,000 realized gain in net income plus $750 gain in OCI which equals the net gain of $2,750 on closing the hedge.

Rule of Thumb

- If inventories are valued at market, treat as **Fair Value Hedge**
  - ("Finished goods" inventory)
- If inventories valued at cost, treat as **Cash Flow Hedge**
  - ("Work In Process" inventory)
  - However, you can elect to treat all "Cash Flow Hedges" as Fair Value Hedges

Applications to Agriculture

Fair Value Hedges

- Stored crop inventories
- Newly-weaned animals
- "Finished Goods @ Market"
- Gain & Loss goes straight through Income Statement

Cash Flow Hedges

- Growing crop inventories
- Growing animals
- "WIP @ Cost"
- Gain & Loss goes to "Other Comprehensive Income"
- Then moved to Income Statement when items are sold

Accounts Required

- Hedging Asset
  - One account for **each** segregated brokerage account
- Inventory Asset
  - One account for crops; one for livestock
- Hedging Gain/Loss Income
  - One account for **each** product or commodity
- Unrealized Gain/Loss Income
  - One account for **all** products or commodities
- Inventory Market Value Gain/Loss Income
  - One account for **each** product or commodity

Additional Cash Flow Hedge Accounts

- Other Comprehensive Income
  - For recording unrecognized income
  - One account for **each** product or commodity
- Accumulated Other Comprehensive Income
  - **Equity** account for **each** product or commodity
  - In farmer terms, “unrealized gain”
  - Use Quantity field to track balance

Account Recap

Account Name	Type	Comments
Hedging Equity	Asset	One account for each trading fund
Inventory Asset	Asset	One account for crops/livestock • Stored Crop Inventories • Feeder Livestock Inventories
Hedging G/L	Income	One account for each commodity
		• Lean Hog G&L
		• Corn G&L
		• Soybean Meal G&L
Unrealized Hedging G/L	Income	Only one account required
Inventory Market Value G/L	Income	Only one account required
Commissions	Expense	Only one account required

Cash Flow Hedge Account Recap

Account Name	Type	Comments
Other Comprehensive Income	Income	One account for each commodity
(OCI)		• Lean Hog OCI
		• Corn OCI
		• Soybean Meal OCI
Accumulated Other Comprehensive Income	Equity	One account for each commodity
(AOCI)		• Lean Hog AOCI
		• Corn AOCI
		• Soybean Meal AOCI

Centers Required

- **Profit Center**
  - Type F/C
  - Farm Financial Standards Managerial Accounting concept
  - Used to post “final” G&L
  - Alternative to allocating G&L to specific production centers or groups
- Or **Crop Marketing (M) Center** for Crops
- **“Delivery Period” Centers** for Livestock
  - Type F
  - By Year / Quarter or Month
  - Used to segregate and “park” G&L on the balance sheet by delivery period

Delivery Period Centers

- Fair Value Hedges
  - Post **directly** to the product’s Profit or Marketing Center
- Cash Flow Hedges
  - Post to F Centers corresponding to delivery period
  - Center can used for all commodities matched to sales in delivery period
  - Examples (single flow):

Delivery Period	Examples
By Year	“HH14” for hog hedges in 2014
By Quarter	“20141” for first quarter of 2014
By Month	“201401” for January 2014

Delivery Period Centers

- Cash Flow Hedges
  - Examples (multiple flows):

Delivery Period	Examples
By Quarter (Cattle)	“C141” for first quarter of 2014
By Quarter (Hogs)	“H141” for first quarter of 2014
By Month (Cattle)	“C1401” for January 2014
By Month (Hogs)	“H1401” for January 2014

Marked-To-Market

- Fair Value Hedges—Hedging Gains
- (Auto-reversing) Accrual (or MV) journal entry

Fair Value Hedging Gains		
Category	**Debit**	**Credit**
Hedge	Hedging Asset	Unrealized Hedging G/L Income
Inventories	Inventory Market Value G/L Income	Crop Inventory Asset

Marked-To-Market

- Fair Value Hedges—Hedging Losses
- (Auto-reversing) Accrual (or MV) journal entry

Fair Value Hedging Losses		
Category	**Debit**	**Credit**
Hedge	Hedging Gain/Loss Income	Hedging Asset
Inventories	Crop Inventory Asset	Inventory Market Value G/L Income

Accruing Closed Cash Trades

- Should be done monthly
- **Management** journal entries
- Reverse cash/tax entries for closed positions
- Record **positive** quantity in Other Comprehensive Income account

Center	Debit	Credit
Delivery Period	Hedging Gain	Other Comprehensive Income
Delivery Period	Other Comprehensive Income	Hedging Loss

Matching Hedging Gain With Animals Sold

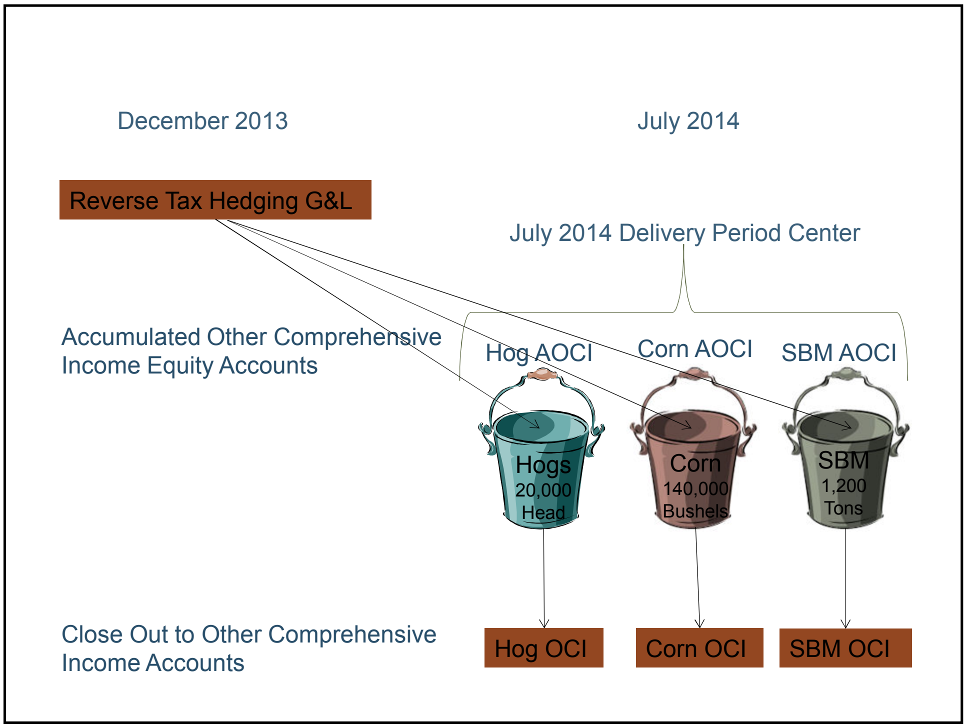
- Should be done monthly
- Management journal entries
- Record **negative** quantity in "Accumulated Other Comprehensive Income" account

Center	Debit	Credit
Delivery Period	Accumulated Other Comprehensive Income	
Profit Center		Other Comprehensive Income

Matching Hedging Loss With Animals Sold

- Should be done monthly
- Management journal entries
- Record **negative** quantity in "Accumulated Other Comprehensive Income" account

Center	Debit	Credit
Delivery Period		Accumulated Other Comprehensive Income
Profit Center	Other Comprehensive Income	

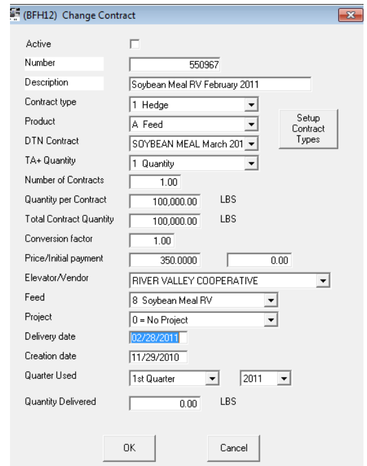


Analysis Alternatives

- By ledger account/delivery period center
- Through contracts / delivery period center
- Through contracts / specific group/project
- Through contracts / specific ingredient/input
- Through contracts / specific ingredient / input / DTN
- Flow feed hedges through cost of goods
- Flow feed hedges & livestock hedges through closeouts

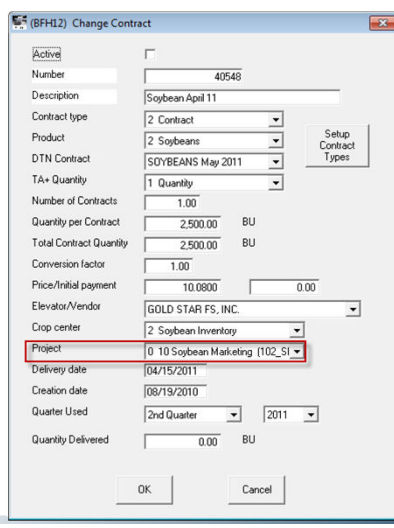
Feed / Fuel Contracts

- Ignore center
- Match on product



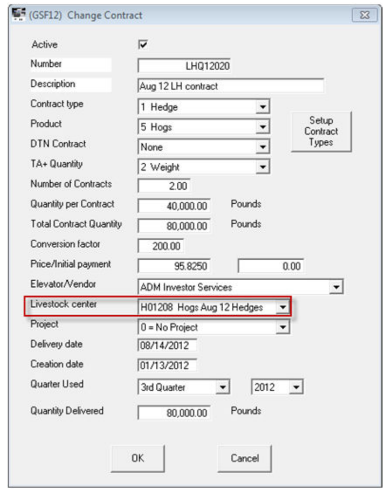
Crop Hedges

- Placed through crop marketing center
- Can be matched against crop project



Livestock Hedges

- Placed through "delivery center" or profit center



Account Settings for Contracts

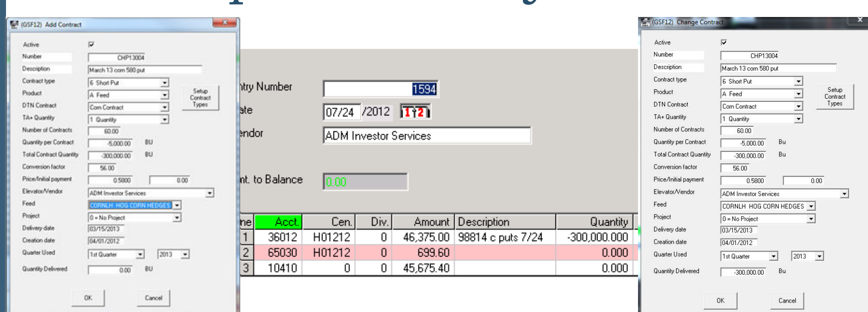
- Note Integration types

Number	Description	Active	Type	Inc/Bal	Int. Type
36011	Gain/Loss Hedging-Lean Hogs	A	C	Y	J-1
36012	Gain/Loss Hedging-Corn-Hogs	A	A	Y	H-1
36013	Gain/Loss Hedging-Corn-Basis	A	A	Y	H-1
36014	Gain/Loss Hedging-Soybean Meal	A	A	Y	H-1
36015	Gain/Loss Hedging-Other	A	A	Y	
36016	Gain/Loss Hedging-Live Cattle	A	C	Y	J-1
36017	Gain/Loss Hedging-Corn-Cattle	A	A	Y	H-1
36018	Gain/Loss Hedging-Other-Cattle	A	A	Y	
36019	Gain/Loss Hedging-Fuel	A	A	Y	F-1
36020	Corn Marketing Contract	A	J	Y	E-1

Options

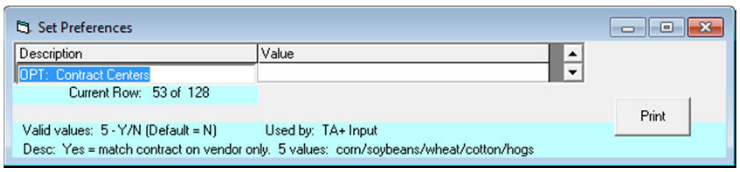
- On open or close of position?
- For long puts and calls use <u>positive</u> quantity
- For short puts and calls use <u>negative</u> quantity

Short Options Entry

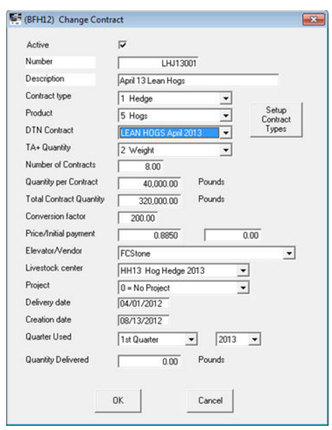


Number	Date	Vendor	Contract	Contract Desc.	Quantity	Amount	Balance	Unit Price
	02/28/2012	ADM Investor Services	CHP13001	Mar 12 corn 580 pu	-300,000.00	-60,000.00	-300,000.00	0.2000
1594	07/24/2012	ADM Investor Services	CHP13001	Mar 12 corn 580 pu	-300,000.00	46,375.00	0.00	
				Current Position	0.00	0.00		

- Contract option
- Matching against feed



DTN with Market Position



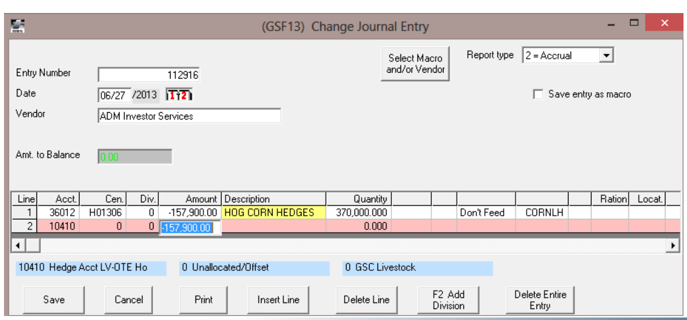
Date	Vendor	Contract	Contract Desc.	Quantity	Amount	Balance	Unit Price	Mrkt Price	Mrkt Value	Variance	Cen.	Cen. Desc.
8/13/2012	FCStone	LHJ13001	April 13 Lean Hogs	320,000.00	283,200.00	320,000.00	0.885	0.8663	277,216.00	42,784.00	HH13	Hog Hedge 2013

Cost Analysis with Hedging

	ACTUAL VALUE	% of TOTAL	ACTUAL PER CWT	ACTUAL PER HEAD
NET SALES				
Market Hog Sales	2,869,173.56	94.60	65.24	180.37
Carcass Premium	258,927.60	8.54	5.78	15.94
Sort Loss	-85,183.29	-2.81	-1.90	-5.24
Hedging Gain/Loss	29,912.50	0.99	0.67	1.84
Low Value Hogs	32,376.33	1.07	67.21	186.07
No Value Hogs	16,058.39	0.53	43.30	101.00
Dead On Arrival	375.65	0.01	67.32	187.83
Freight & Trucking	-42,436.43	-1.40	-0.95	-2.61
Marketing Expense	-46,103.47	-1.52	-1.03	-2.84
Total NET SALES	3,033,100.84	100.00	67.65	186.74
DIRECT PRODUCTION EX				
Purchased Pigs	998,688.17	45.74	378.14	43.67
Inv. Adjustment	-255,651.07	-11.71	-5.70	-15.74
Feed	1,528,232.51	69.99	34.09	94.09
Feed GMD	82,874.06	3.80	1.85	5.10
Feed Adjustment	-224,927.65	-10.30	-5.02	-13.85
Feed Hedge	4,997.87	0.23	0.11	0.31
Cont. Grower Direct	1,507.64	0.07	0.03	0.09
Direct Vet. Services	271.69	0.01	0.01	0.02
Drugs/Medication	34,541.40	1.58	0.77	2.13
Drug Adjustment	12,999.82	0.60	0.29	0.80
Total DIRECT PRODUCTION EX	2,183,534.44	100.00	48.70	134.44

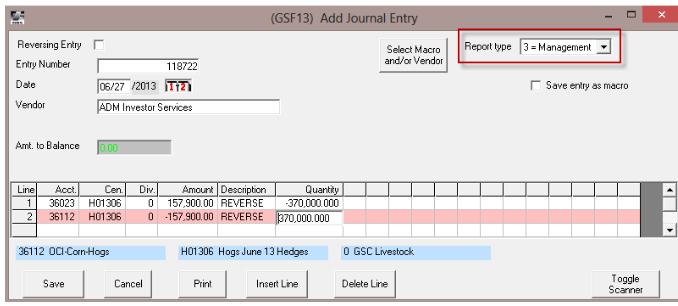
Feed OCI Entries

- Closing position
  - Zeroes out hedged feed balance
  - Realizes hedging G/L
  - Parks G/L in Delivery Period Center



Feed OCI Entries

- "Reversing" entry
  - Management level (one level higher than last entry)
  - Reverse Hedging Realized G/L account
  - Record to OCI Unrealized G/L account



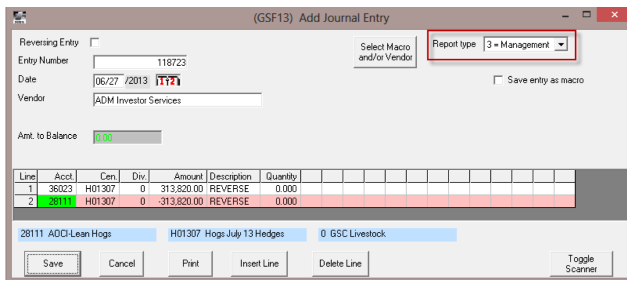
Cash Flow Hedge OCI Entries

- For trades to be recognized/allocated to another time period
  - **User-Defined Accounting Report** for G/L Account
  - Recap by Center
  - Accrual level
  - Note balance for each combination of AOCI Account/ Delivery Period Center not in the current month

Cen.	Description	Unit Price	Ave. Wt.	Price/Wt.	Quantity	Weight	Amount
H01306	Hogs June 13 Hedges	0.0000	0.00	0.000	0.000	0.000	-241,660.00
H01307	Hogs July 13 Hedges	0.0000	0.00	0.000	0.000	0.000	-313,820.00
		0.0000	0.00	0.000	0.000	0.000	-555,480.00

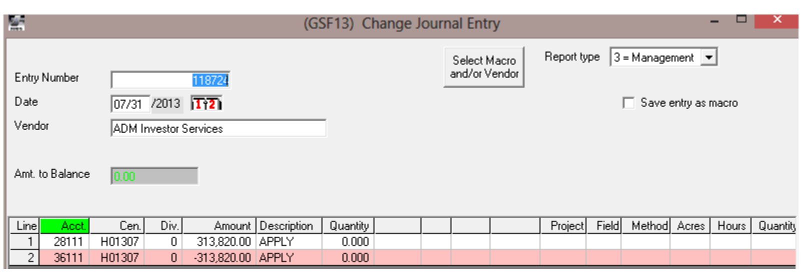
Cash Flow Hedge OCI Entries

– **Reverse to <u>Accumulated</u>** OCI
- **<u>Management</u>** level
- **Reverse <u>accumulated</u>** amount original G/L Income account to the **<u>Unrealized</u>** G/L Income account
- Use the **<u>Delivery Period Center</u>** from original entry
- **Offset to AOCI Equity account**



Cash Flow Hedge OCI Entries

– **Allocate to Delivery Period**
- **<u>Management</u>** level
- **Reverse Accumulated OCI Equity Account**
- Use the **<u>Delivery Period Center</u>** from original entry
- **Post to OCI Income account**



Cash Flow Hedge OCI Entries

– **Transaction Recap**

Date	Acct.	Acct Desc.	Cen.	Cen. Desc.	Debit Amt.	Amount	Credit Amt.	Description	Entry Type
06/27/2013	36011	Gain/Loss Hedging-L	H01307	Hogs July 13 Hedges	313,820.00	-313,820.00	0.00		Journal - Financial
06/27/2013	36023	Unrealized G/L Hogs	H01307	Hogs July 13 Hedges	0.00	313,820.00	313,820.00	REVERSE	Journal - Mngt.
06/27/2013	28111	AOCI-Lean Hogs	H01307	Hogs July 13 Hedges	313,820.00	-313,820.00	0.00	REVERSE	Journal - Mngt.
07/31/2013	28111	AOCI-Lean Hogs	H01307	Hogs July 13 Hedges	0.00	313,820.00	313,820.00	APPLY	Journal - Mngt.
07/31/2013	36111	OCI-Lean Hogs	H01307	Hogs July 13 Hedges	313,820.00	-313,820.00	0.00	APPLY	Journal - Mngt.
					941,460.00		627,640.00		
						-313,820.00			