

**Accounting for Hedging  
Transactions  
(And Syncing with CIH Margins)**

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**THANKS TO:  
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MONTANA STATE UNIVERSITY BILLINGS**

**Comments from Daryl Ellis at  
the 2009 User Conference:**

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## Hedging and Marketing Tools

- Ability to consolidate physical, contract, and futures positions
  - Some form of “Positions” report showing % cash commodity covered via various positions.
  - State of IL requires a “Positions” report for Grain Merchandisers, why not something similar for production agriculture
- Contract module is a start...


## Hedging and Marketing Tools

- I have seen million dollar swings in hedging gains(losses), but can't answer crop year, or type of trades most successful
  - Ability to monitor individual or group of trades
    - ✦ Many monthly statements have 6-10 pages of open and closed positions. Very difficult to trace!
  - Need reporting improvement in “netting” of cash and futures trades – especially timing and separation of sales vs procurements **How to push gains (losses) to group or project level ←Worthy goal, but is this practical?**
  - Hedging activities may cover 3+ years for a single crop year.

## Basic Principles

- **Marking to Market for Hedging Instrument**
  - Not unlike the current FFSC Guidelines for market-based financial statements when valuing current assets
- The **current value** of the hedging instrument is reported on the **balance sheet** at its **current fair value**.
- **Changes** in the value of hedging instrument are reported on the **income statement**.
  - Examples of hedging instruments: futures contracts, forward contracts, options, interest rate swaps

- **Marking to Market for the Hedged Item**
  - The current FFSC Guidelines provide guidance on this for market-based financial statements when valuing inventory.
    - ✦ Users of the Guidelines may already be doing this!
    - ✦ Current market values are reported on the balance sheet
    - ✦ Changes in value are reported on the income statement

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- Hedged items include inventory and firm commitments
  - Inventory of market livestock or crops
    - “Market Livestock Inventory” or “Crop Inventory” on balance sheet (current assets)
  - Firm commitments are contracts to buy or sell inventory (livestock or crops)
    - “Firm Commitment” account on balance sheet (equity)

## 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

## 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

## Fair Value Hedges

- Can utilize these hedging instruments: futures, forwards, options, swaps
- Can be used for these hedged items: inventory on hand or firm commitments
- Gains or losses (changes in value) of hedging instruments and hedged items are reported on the income statement
  - “Change in Market Livestock (or Crop) Inventory”
  - “Change in Firm Commitment”

## Cash Flow Hedge

- Can utilize these hedging instruments: futures, forwards, options, swaps
- Can be used for “forecasted transactions” – transactions that will occur in the future at the market price existing at that time
  - Buying or selling inventory on the spot market
  - No contract (firm commitment) exists
- Gains/losses: part of it is reported on the income statement and part of it is reported on the balance sheet

## Cash Flow Hedge (continued)

- Gains and losses:
  - Change in the value of the hedging instrument result from the change in the futures price (for a futures contract).
    - ✦ Offset by the change in the spot price.
  - Change in spot price and change in futures price are netted and reported on the income statement.
  - Changes in spot prices accumulate in “Other Comprehensive Income” on the balance sheet until forecasted transaction occurs, then transferred to income statement.

## Examples for Futures Contracts

- Four possible accounting events:
  - Establishing margin account
  - Margin call
  - Preparing financial statements before settlement
  - Settlement of the futures contract
- Possible hedges:
  - Fair Value hedge for Inventory
  - Fair Value hedge for a Firm Commitment
  - Cash Flow hedge for a Forecasted Transaction
  - [See spreadsheet examples]

## Year 1 Examples

	Beginning Equity	Deposits to Hedging Account	Withdrawals from Hedging Account	Ending Equity		
<b>Year 1</b>						<u>Income Statement</u>
Balance Sheet	-			1,000		Withdrawals-Deposits (1,000)
Cash flows		1,000	-			Change in hedging equity 1,000
						Hedging gains/losses -
<b>Year 2</b>						<u>Income Statement</u>
Balance Sheet	1,000			1,000		Withdrawals-Deposits 1,000
Cash flows		-	1,000			Change in hedging equity -
						Hedging gains/losses 1,000
<b>Year 3</b>						<u>Income Statement</u>
Balance Sheet	1,000			3,000		Withdrawals-Deposits (4,000)
Cash flows		5,000	1,000			Change in hedging equity 2,000
						Hedging gains/losses (2,000)
<b>Year 4</b>						<u>Income Statement</u>
Balance Sheet	3,000			2,000		Withdrawals-Deposits 5,000
Cash flows		5,000	10,000			Change in hedging equity (1,000)
						Hedging gains/losses 4,000

## Year 2 Examples

	Beginning Equity	Deposits to Hedging Account	Withdrawals from Hedging Account	Ending Equity		
<b>Year 1</b>						
Balance Sheet	5,000			3,000		<u>Income Statement</u>
Cash flows		-	-			Withdrawals-Deposits -
						Change in hedging equity (2,000)
						Hedging gains/losses (2,000)
<b>Year 2</b>						
Balance Sheet	5,000			3,000		<u>Income Statement</u>
Cash flows		50,000	-			Withdrawals-Deposits (50,000)
						Change in hedging equity (2,000)
						Hedging gains/losses (52,000)
<b>Year 3</b>						
Balance Sheet	5,000			3,000		<u>Income Statement</u>
Cash flows		50,000	8,000			Withdrawals-Deposits (42,000)
						Change in hedging equity (2,000)
						Hedging gains/losses (44,000)
<b>Year 4</b>						
Balance Sheet	5,000			3,000		<u>Income Statement</u>
Cash flows		50,000	8,000			Withdrawals-Deposits (42,000)
						Change in hedging equity (2,000)
						Hedging gains/losses (44,000)

## Rule of Thumb

- If inventories are valued at market, treat as **Fair Value Hedge**
- If inventories valued at cost, treat as **Cash Flow Hedge**



## 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” (equity) on Balance Sheet
- Then moved to income statement when items are sold

## Accounts Required

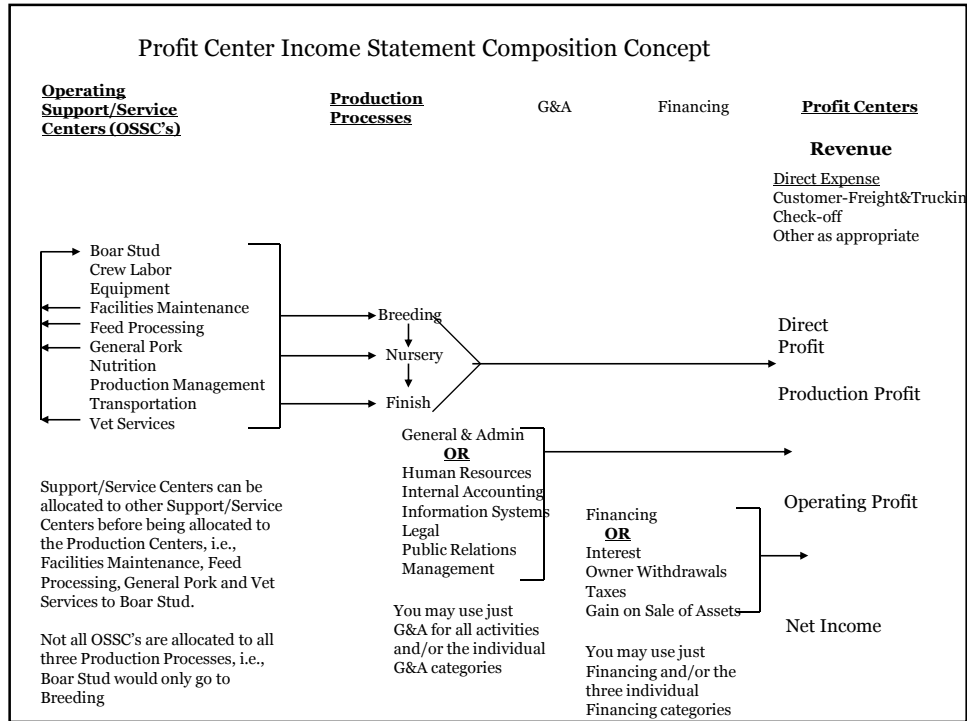
- **Hedging Asset**
  - One account for **each** segregated brokerage account
- **Hedging G&L Income**
  - One account for **each** product or commodity
- **“Other Comprehensive Income”**
  - Equity account for **each** product or commodity
  - In farmer terms, “unrealized gain”
  - Only required for Cash Flow Hedges
  - Use Quantity field to track balance

## Account Recap

Account Name	Type	Comments
Hedging Equity	Asset	One account for each trading fund
Hedging G&L	Income	One account for each commodity
		• Lean Hog G&L
		• Corn G&L
		• Soybean Meal G&L
Other Comprehensive Income	Equity	One account for each commodity
		• Lean Hog OCI
		• Corn OCI
		• Soybean Meal OCI

## Centers Required

- **Profit Center**
  - Type F
  - NPPC/Farm Financial Standards Managerial Accounting concept
  - Used to post “final” G&L
  - Preferred over allocating G&L to specific production centers or groups
- **“Delivery Period” Centers**
  - Type S
  - 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 Center
- **Cash Flow Hedges**
  - Post to S Centers corresponding to delivery period
  - Center can used for all commodities matched to sales in delivery period
  - Examples:

Delivery Period	Examples
By Quarter	"20111" for first quarter of 2011
By Month	"201101" for January 2011

## Accruing Closed Cash Trades

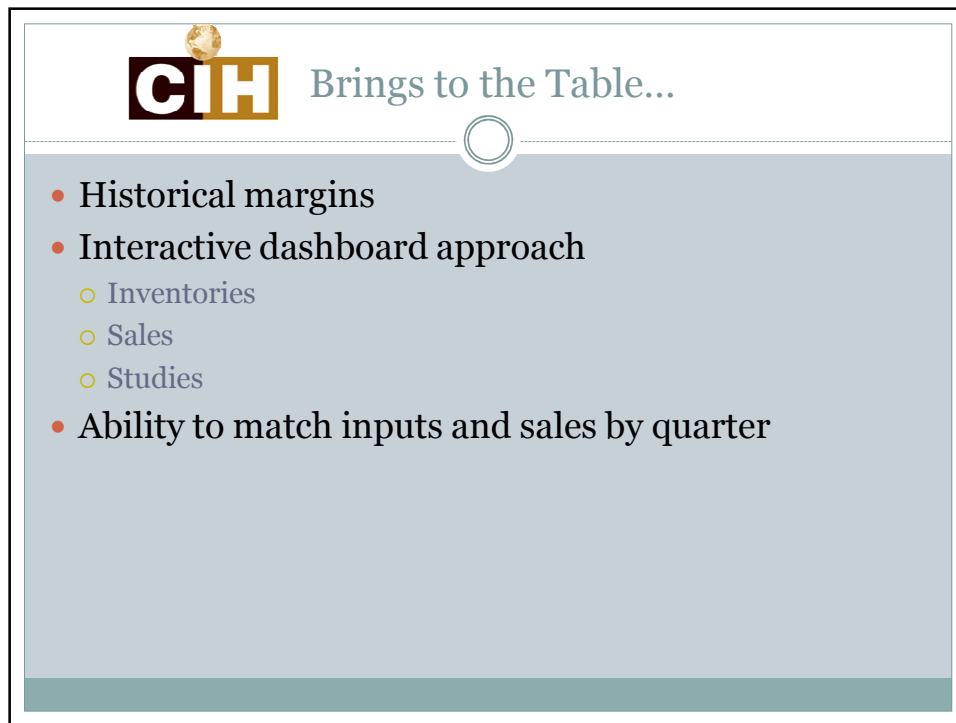
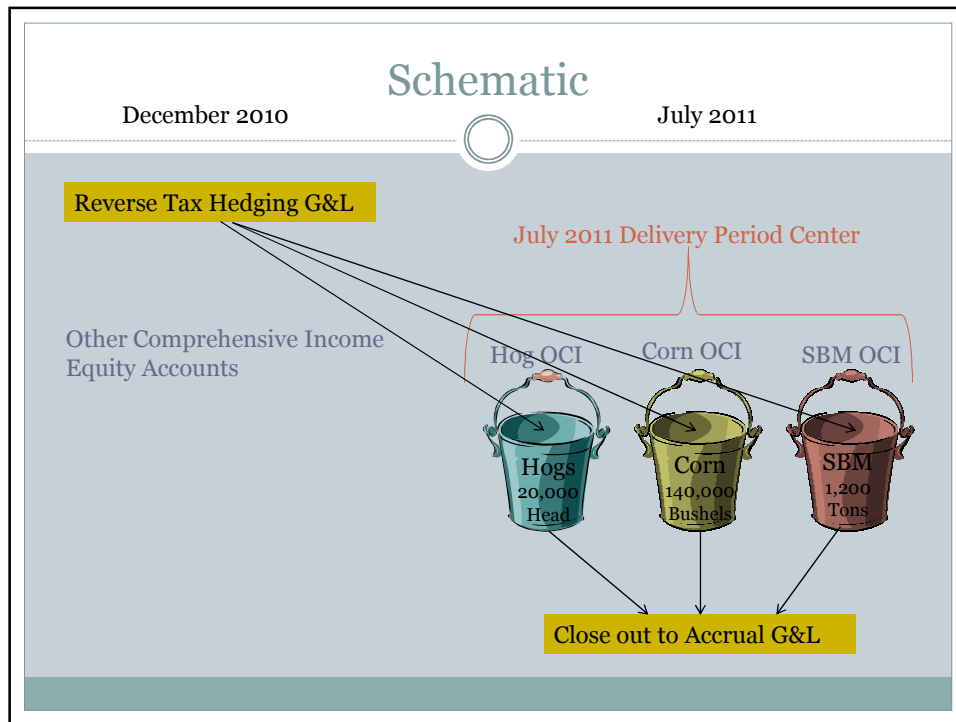
- Should be done monthly
- **Accrual** journal entries
- Reverse cash/tax entries for closed positions
- Record **positive** quantity in Other Comprehensive Income account

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

## Matching G&L With Animals Sold

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

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



## FBS Objectives

- What we're not going to do: duplicate CIH
- CIH is not an accounting system
- Import CIH positions into FBS contracts
- CIH as supporting schedule for Russell

## Compatibility

### CIH

- Matched to sales
- Net premiums/delivery in basis
- Allocated to quarter
- Future projections
  - Hard to evaluate position once quarter begins
- Creates transaction detail

### FBS

- Matched to time period
  - J.I.T. for feed purchases
  - **Monitor performance**
- Detail by account
- Added quarter to contracts
- Accurate for evaluating actual accounting performance
- Import transactions into Contracts

