Introduction to Margin Management
What is a Margin?

The concept of a profit margin is not new. Revenues minus expenses equal the profit margin of a business.
How to Calculate the Margin?

The profit margin calculation is different for every pork, beef, crop, and milk producer. But each type has a few elements in common.

• Hog Operations
• Cattle Feedlots
• Dairies
• Crop Producers
Hog Operation Margin

• In a hog operation “lean” hog sales are on the revenue side of the equation
• The expense side of the ledger is divided into feed and non-feed costs.
Cattle Feedlot Margin

- Live cattle sales are on the revenue side of the feedlot equation.

- The expense side of the ledger is divided into feeders, feed and non-feed costs.
Dairy Margin

- Milk sales are on the revenue side of the dairy equation.
- The expense side of the ledger is also divided into feed and non-feed costs.

**Milk Sales**

<table>
<thead>
<tr>
<th>Feed Costs</th>
<th>Non-Feed Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silage</td>
<td>Utilities</td>
</tr>
<tr>
<td>Haylage</td>
<td>Staff</td>
</tr>
<tr>
<td>Meal</td>
<td>Vet</td>
</tr>
<tr>
<td>Corn</td>
<td>etc</td>
</tr>
<tr>
<td>DDGS</td>
<td>etc</td>
</tr>
</tbody>
</table>

**Profit Margin**
Crop Production Margin

• Crop sales are on the revenue side of the equation

• Land, fuel, seed and fertilizer expenses are some of the costs.

Corn, Wheat, or Soybean Sales

Production Cost

• Fuel
• Land
• Fertilizer
• Seed

• Staff
• Storage
• Drying
• etc

Profit Margin
Protecting Profit Margins for the Future
Why Protect Future Profit Margins?

• Help your business through the inevitable lean times that are part of any cyclical industry
• Significantly improve profitability
• Assist with planning, budgeting, borrowing discussions with lenders
Ways to Protect Future Profit Margins

• Using the commodities futures market, businesses can trade contracts to help secure revenue for deferred periods.

• They can also trade contracts to help control costs on the expense side, including: corn, soybean meal and fuel.
How Can the Futures Market Protect Profits?

- Futures prices correlate to local cash prices
- Futures contracts can be used as substitute purchases and sales for the physical commodities in deferred periods
How Can the Futures Market Protect Profits?

Holding other expenses constant and ignoring basis for a moment, if you sell futures against your projected sales and simultaneously buy futures against your projected feed purchases, you have effectively locked in a profit margin for your operation.
Protecting a Forward Profit Margin

The futures market allows a producer to contract around a combination of values for input costs as well as output sales that projects a profit.

Spot Margin = loss

Projected Margin = profit
Protecting a Forward Profit Margin

The futures market allows a producer to contract around a combination of input costs as well as outputs sales that projects a profit.

Spot sales are current transactions taking place in the cash market between you and the packer, processor, elevator or other buyer for immediate delivery.

Spot purchases are transactions taking place in the cash market for immediate delivery between you and the feed company or input supplier.

Both spot purchases and sales are based upon the price of the corresponding futures contract with the closest expiration.

Spot Margin = loss

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Protecting a Hog Operation Margin

The futures market allows a hog producer to contract around a combination of values for corn & meal as well as lean hogs that projects a profit.

**Today**

- **Spot Prices**
  - Nearby Lean Hogs: $65/cwt
  - Nearby Corn: $4/bu
  - Nearby Meal: $302/ton
  - Other Current Costs

**Projected Margin = loss**

**Next Year**

- **Futures Prices**
  - Deferred Lean Hogs: $75/cwt
  - Deferred Corn: $3/bu
  - Deferred Meal: $278/ton
  - Other Projected Costs

**Projected Margin = profit**
Protecting a Cattle Feedlot Margin

The futures market allows a feedlot to contract around a combination of values for feeder cattle and corn as well as live cattle that projects a profit.

**Today**
- **Spot Prices**
  - Nearby Live Cattle: $83/cwt
  - Nearby Corn: $4/bu
  - Nearby Feeders: $96/cwt
  - Other Current Costs

- Spot Margin = \textbf{loss}

**Next Year**
- **Futures Prices**
  - Deferred Live Cattle: $91/cwt
  - Deferred Corn: $3/bu
  - Deferred Feeders: $88/cwt
  - Other Projected Costs

- Projected Margin = \textbf{profit}

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Protecting a Dairy Margin

The futures market allows a dairy to contract around a combination of feed-equivalent values for corn & meal as well as class III milk to project a profit.

**Today**

<table>
<thead>
<tr>
<th>Spot Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearby Class III Milk $13.5/cwt</td>
</tr>
<tr>
<td>Nearby Corn $4/bu</td>
</tr>
<tr>
<td>Nearby Soybean Meal $302/ton</td>
</tr>
<tr>
<td>Other Current Costs</td>
</tr>
</tbody>
</table>

Spot Margin = **loss**

**Next Year**

<table>
<thead>
<tr>
<th>Futures Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deferred Class III Milk $15/cwt</td>
</tr>
<tr>
<td>Deferred Corn $3/bu</td>
</tr>
<tr>
<td>Deferred Meal $278/ton</td>
</tr>
<tr>
<td>Other Projected Costs</td>
</tr>
</tbody>
</table>

Projected Margin = **profit**
Protecting a Crop Production Margin

The futures market allows a farmer to contract a price for their crops around the costs of producing that crop to lock in a projected profit.

<table>
<thead>
<tr>
<th>Today</th>
<th>Spot Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nearby Soybeans</td>
<td>$9/bu</td>
</tr>
<tr>
<td>Current Production Cost</td>
<td></td>
</tr>
<tr>
<td>Current Land Cost</td>
<td></td>
</tr>
</tbody>
</table>

Spot Margin = **loss**

<table>
<thead>
<tr>
<th>Next Year</th>
<th>Futures Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>New-Crop Soybeans</td>
<td>$11/bu</td>
</tr>
<tr>
<td>Projected Production Cost</td>
<td></td>
</tr>
<tr>
<td>Projected Land Cost</td>
<td></td>
</tr>
</tbody>
</table>

Projected Margin = **profit**
Realizing Profit Margins
Realizing a Deferred Profit Margin

Now, let’s step forward to next year…

Last Year

Next Year
Realizing a Deferred Profit Margin

When the actual production period approaches and the cash market transactions for corn, meal, livestock or milk take place, the futures market position is offset and gains or losses are tallied to calculate a net, realized margin.

\[
\text{Futures Market Positions with Projected Profits} \Rightarrow \text{Local Cash Market Transactions} + \text{Offsetting Futures Market Positions} = \text{Realized Net Margin}
\]
Realizing a Deferred Profit Margin

Last Year

Futures Market Positions with Projected Profits

Sell Hogs
Buy Feed

Actual Margin
-$10/cwt Loss

Now

Local Cash Market Transactions

Offsetting Futures Market Transactions

Realized Net Margin

Hog prices have declined and feed costs have increased so today’s actual margin is now a loss, versus what was projected last year.
Realizing a Deferred Profit Margin

Last Year

Futures Market Positions with Projected Profits

Sold Hog Futures $72.50/cwt

Now

Local Cash Market Transactions

Sell Hogs $65/cwt

Offsetting Futures Market Transactions

Buy Back Hog Futures $65/cwt

Realized Net Margin $7.50/cwt

Hog prices have declined so the futures sold last year are offset today with a gain.
Realizing a Deferred Profit Margin

Corn and meal prices have increased, so the futures bought last year at lower prices are also offset today with a gain.

The prices and calculations above for illustrative purposes only.
Realizing a Deferred Profit Margin

Last Year
- Futures Market Positions with Projected Profits
  - Sold Hog Futures
  - Bought Corn & Meal Futures

Now
- Local Cash Market Transactions
  - Sell Hogs
  - Buy Feed
- Offsetting Futures Market Transactions
  - Buy Back Hog Futures
  - Sell Back Corn & Meal Futures

= Realized Net Margin

The $1 per bushel corn gain combined with the $80 per ton meal gain is roughly equal to a $7.50/cwt gain in hogs.
Realizing a Deferred Profit Margin

**Last Year**

Futures Market Positions with Projected Profits

- Sold Hog **Futures**
- Bought Corn & Meal **Futures**

**Now**

Local Cash Market Transactions + Offsetting Futures Market Transactions = Realized Net Margin

- Sell Hogs
- Buy Feed
- Buy Back Hog **Futures**
- Sell Back Corn & Meal **Futures**

The balance of all offsetting transactions produces a **gain**.

Position Offset $15/cwt Gain
Realizing a Deferred Profit Margin

Last year’s projected margin becomes a reality:

**Last Year**

- Futures Market Positions with Projected Profits
  - Sold Hog *Futures*
  - Bought Corn & Meal *Futures*

- Projected Margin $5/cwt Profit

**Now**

- Local Cash Market Transactions
  - Sell Hogs
  - Buy Feed

- Offsetting Futures Market Transactions
  - Buy Back Hog Futures
  - Sell Back Corn & Meal Futures

- Realized Net Margin
  - Actual Margin -$10/cwt Loss + Position Offset $15/cwt Gain = $5/cwt Profit
Conclusion

The profit margin in your hog, cattle, crop or dairy operation is always the revenue minus the cost of production.

Identifying the forward margin in your operation is the first step toward protecting profits for production periods in the future.

Establishing protection around the unrealized forward margin is essential for sustained profitability and business growth.
END