Knowing and Managing a Grain Basis
Grain Basis

Basis = Cash – Futures Price
Characteristics of Basis

- Less volatile than futures or cash price
- Basis can be positive or negative
- Basis has seasonal trends
Factors that Determine Basis

- Transportation costs
- Local supply and demand conditions
- Quality variation from underlying futures contract specifications
- Availability of substitutes
Knowledge of Basis Information is Critical

- Evaluating forward pricing opportunities
- Evaluating grain storage decisions
Trends in Grain Basis

- Basis tends to be “wider” in the months prior to contract expiration due to uncertainty

- Basis tends to equal transportation cost as the contract reaches expiration due to the lack of uncertainty
Seasonal Basis Trends

- Basis tends to be the weakest at harvest
  - Ample grain supplies
  - Greater demand for transportation services

- Basis tends to improve post harvest
  - Improving local supply and demand
  - Less demand on transportation services
Figure 1. Texas panhandle cash wheat price and March Kansas City futures price as the delivery month approaches
Tracking Basis

- Cash price vs. nearby futures contract

- Provides information necessary to evaluate
  - Storage decisions by combining -------
    - Expected improvements in basis by storing
    - Value of storage offered by the futures market deferred contract (storage) – harvest contract
    - For more information on the storage decision see publication entitled “Post Harvesting Marketing Alternatives” (RM2-30.0)

- Forward cash contract and basis contract offers for harvest delivery
  - Forward basis offers are more stable than cash or futures but do vary
  - Tracking forward cash and/or basis contract offers may help identify excellent pricing opportunities
# Basis Table

<table>
<thead>
<tr>
<th>Nearby Futures Contract</th>
<th>Harvest Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Date</td>
</tr>
<tr>
<td>Cash Price</td>
<td>Cash Price</td>
</tr>
<tr>
<td>Futures Contract Month</td>
<td>Futures Contract Month</td>
</tr>
<tr>
<td>Futures Contract Price</td>
<td>Futures Contract Price</td>
</tr>
<tr>
<td>Basis</td>
<td>Basis</td>
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<tr>
<td>Forward Cash Contract Offer</td>
<td>Forward Cash Contract Offer</td>
</tr>
<tr>
<td>Harvest Contract Futures Price</td>
<td>Harvest Contract Futures Price</td>
</tr>
<tr>
<td>Implied Basis</td>
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</tr>
<tr>
<td>Basis Contract Offer</td>
<td>Basis Contract Offer</td>
</tr>
</tbody>
</table>
Managing Basis Risk

- **Forward Cash Contract**
  - Locks price and basis

- **Basis Contract**
  - Locks basis with price to be determined at or prior to delivery

- **Synthetic Basis Contract**
  - Combination of a forward cash contract and a long position on the futures
  - Final price is determined when futures contract is offset
  - Transaction costs do exist and margin calls are possible

- **Minimum Price Contract**
  - Establishes a floor price and allows the opportunity to benefit from rising prices
## Diagram of Basis Forward Pricing Decision

<table>
<thead>
<tr>
<th>Futures Price</th>
<th>Acceptable</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptable</td>
<td>Forward Contract</td>
<td>Hedge</td>
</tr>
<tr>
<td>Unacceptable</td>
<td>Basis Contract</td>
<td>Do nothing</td>
</tr>
</tbody>
</table>