

# Business Management In Agriculture

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## Understanding Basis

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A joint project of the Cooperative Extension Service,  
Farm Credit and Chicago Mercantile Exchange

# BASIS

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A cash price minus a commodity futures contract price.

# CME Hog Contract

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1. July
2. Live hogs
3. 210-240 pounds
4. Peoria

# Uses of Basis

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- Estimating:
  - Cash price
  - Hedge price
  - Minimum or maximum price
- Determining:
  - Good offer
  - When to market

# April Price Outlook

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April feeder contract	\$78.50
Expected basis	+ 3.00
Expected cash price	\$81.50
Price objective	\$80.00

# Expected Hedge Price

April feeder contract	\$78.50
Expected basis	+ 3.00
Fees & interest	- 0.40
Expected cash price	\$81.10
Price objective	\$80.00

# Expected Minimum Price

Strike price	\$82.00
Expected basis	+ 3.00
Premium	- 3.50
Fees & interest	- 0.25
Expected min. price	\$81.25
Price objective	\$80.00

# Pricing Options

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Forward contract	\$79.00
Expected cash price	\$81.50
Hedge price	\$81.10
Minimum price	\$81.25



# Timing Sales

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1. Decide on months to evaluate
2. Collect futures contract prices
3. Collect basis estimates
4. Calculate expected price
5. Estimate carrying costs
6. Calculate expected net return

	Nearby	futures		Exp.
Mo.	Mo.	Price	Basis	price
Jul	Sep	\$3.90	-0.30	\$3.60
Aug	Sep	3.90	-0.29	3.61
Sep	Dec	4.05	-0.26	3.79
Oct	Dec	4.05	-0.25	3.80
Nov	Dec	4.05	-0.24	3.81
Dec	Mar	4.10	-0.23	3.87
Jan	Mar	4.10	-.13	3.97

<b>Mo</b>	<b>Exp. price</b>	<b>Storage costs</b>	<b>Net price</b>
Jun	\$3.50	\$0.0	\$3.50
Jul	3.60	0.1825	3.4175
Aug	3.61	0.22	3.39
Sep	3.79	0.255	3.535
Oct	3.80	0.29	3.51
Nov	3.79	0.325	3.465
Dec	3.87	0.36	3.51
Jan	3.97	0.395	3.575

**Basis:**

Weak

**Futures Price:**

Low

**Action:**

- Stay unpriced
- Deferred price contract
- Government loan

**Basis:**

Weak

**Futures Price:**

High

**Action:**

- Storage hedge
- Remain unpriced
- Be cautious on forward contract

**Basis:**

Normal

**Futures Price:**

Normal

**Action:**

- Buy put options
- Sell grain/buy call options
- Stagger sales

**Basis:**

Strong

**Futures Price:**

Low

**Action:**

- Sell cash
- Sell cash/buy call options

**Basis:**

Strong

**Futures Price:**

High

**Action:**

- Sell cash
- Forward contract
- Be cautious on hedging



# Basis Risk

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The basis plus and minus one (1) standard deviation creates a range that includes the actual basis two-thirds of the time.

# Basis Risk

Basis plus and minus one standard deviation

\$3.00	\$3.00
<u>+1.20</u>	<u>-1.20</u>
\$4.20	\$1.80

# Cash Price Risk

\$81.50	\$81.50	\$81.50
<u>x 0.15</u>	<u>- 12.25</u>	<u>+ 12.25</u>
\$12.25	\$69.25	\$93.75

# Cash vs. Basis Risk

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**Cash**

\$69.25



\$93.75

**Basis**

\$79.90



\$82.30