

## HEDGING

Hedging simply involves substituting a position in the futures market today for a position you expect to take in the cash market at some later date.

### Hedging

#### ADVANTAGES

- Eliminates price risk
- Does not require delivery
- Allows for pricing any time during the marketing year.

#### DISADVANTAGES

- You still have basis risk
- Contracts are lumpy
- Margin calls can result in negative cash flow before the cash crop is sold

If you want to sell grain at some later date, you can “lock in” the final sales price by selling a futures contract with a delivery date just after the expected cash sale today (go short the futures market).

Assume it is currently May 15, and you decide to price corn for November delivery using a hedge. The first step is to sell a December corn futures contract. This is the first contract to expire after the expected cash delivery date.

The expected Net Selling Price is calculated as:

$$\begin{array}{r} \text{Futures Selling Price} \\ + \text{Expected Basis} \\ - \text{Futures Brokers Commission} \\ \hline \text{Expected Net Selling Price} \end{array}$$

### Sell Hedge Example

#### May 15

- Sell 1 Dec futures corn contract @ \$2.65/bu
- Expected harvest basis – 0.35/bu
- Expected net selling price in November \$2.29/bu

$$\begin{array}{r} \$2.65 \quad \text{futures price} \\ + (-0.35) \quad \text{basis} \\ - 0.01 \quad \text{broker's commission} \\ \hline \$2.29 \end{array}$$

#### November 15

- Buy 1 Dec futures corn contract @ \$1.95
- Sell cash corn @ \$1.60 (basis is as expected)

$$\begin{array}{r} \text{Net Price:} \\ \$1.65 \text{ cash sale} \\ + \$0.70 \text{ futures profit} \\ \quad \text{(sold at } \$2.65, \\ \quad \text{bought at } \$1.95) \\ - \$0.01 \text{ broker's commission} \\ \hline \text{Net Price} = \$2.29 \end{array}$$

The only thing that will make the actually realized price from a hedge different from the expected net selling price is a different basis than expected.

- A weaker than expected basis results in a realized price less than the expected net selling price
- A stronger than expected basis results in a realized price higher than the expected net selling price

Date	Price per Bushel	Action	Margin Action	Account Balance
		Initial margin = \$500 Maintenance margin = \$350		
17-Jan	\$2.50	Sell July corn	Deposit \$500	\$500
18-Jan	\$2.52			\$400
19-Jan	\$2.54			\$300
			Margin Call \$200	\$500
20-Jan	\$2.53			\$550
21-Jan	\$2.60			\$200
			Margin Call \$300	\$500
24-Jan	\$2.57			\$650
25-Jan	\$2.55			\$750
26-Jan	\$2.51			\$950
			Withdraw \$450	\$500
27-Jan	\$2.49			\$600
28-Jan	\$2.44	Buy July corn		\$800

Assume it is currently November 15, and you decide to price corn for April delivery using a hedge. The first step is to buy a May corn futures contract. This is the first contract to expire after the expected cash purchase date.

The expected Net Purchase Price is calculated as:

$$\begin{aligned} & \text{Futures Purchase Price} \\ & + \text{Expected Basis} \\ & + \text{Futures Brokers Commission} \end{aligned}$$

---

Expected Net Purchase Price

## Buy Hedge Example

Nov 15

- Buy 1 May futures corn contract @ \$2.65/bu
- Expected basis -0.15/bu
- Expected net purchase price in November \$2.51/bu

$$\begin{aligned} & \$2.65 \quad \text{futures price} \\ & + (-0.15) \quad \text{basis} \\ & + 0.01 \quad \text{broker's commission} \\ & \hline & \$2.51 \end{aligned}$$

April 15

- Sell 1 May futures corn contract @ \$3.65
- Buy cash corn @ \$3.50 (basis is as expected)

- Net Price:
  - \$3.50 cash purchase
  - \$1.00 futures profit (bought at \$2.65, sold at \$3.65)
  - + \$0.01 broker's commission

Net Price = \$2.51

Table 1. Margin Account Maintenance.

Date	Price per Bushel	Action	Margin Action	Account Balance
		Initial margin = \$500 Maintenance margin = \$350		
17-Jan	\$2.50	Buy July corn	Deposit \$500	\$500
18-Jan	\$2.48			\$400
19-Jan	\$2.46			\$300
			Margin Call \$200	\$500
20-Jan	\$2.47			\$550
21-Jan	\$2.40			\$200
			Margin Call \$300	\$500
24-Jan	\$2.43			\$650
25-Jan	\$2.45			\$750
26-Jan	\$2.49			\$950
			Withdraw \$450	\$500
27-Jan	\$2.51			\$600
28-Jan	\$2.55	Sell July corn		\$800

The only thing that will make the actually realized price from a hedge different from the expected net selling price is a different basis than expected.

- A weaker than expected basis results in a realized price less than the expected net purchase price
- A stronger than expected basis results in a realized price higher than the expected net purchase price