Post-Harvest Marketing Alternatives

Curriculum Guide

I. Goals and Objectives

A. Understand the benefits of pricing grain prior to planting for post harvest sales.
B. Learn and understand the mechanics of several post-harvest marketing strategies.
C. Learn the advantages and disadvantages of several post-harvest marketing strategies.

II. Description/Highlights

A. Due to production risks it is advantageous for producers to consider implementing pricing strategies on a portion of their crop(s) at or before planting.. The willingness to price a crop prior to planting lengthens the producer's marketing season and therefore allows more opportunities to capture a desired target price.

B. Review the following strategies.

C. Storing Grain (speculative storage)

Storing grain that is not priced places the producer in a speculative position. To determine if there is an economic incentive to store, the producer first needs to know the cost associated with storing the grain (storage rates, in and out charges, shrink, interest/opportunity cost, etc.) and have some idea of how far cash prices might rise in the future. The important point is whether you expect the increase in market price to exceed the costs associated with storage.

The producer must determine if the expected cash price increase is large enough to more than offset the associated storage costs. One way this can be accomplished is by reviewing the futures prices for upcoming months along with the current futures price, local cash price, and storage costs.

Review the speculative storage example, Table 1, and the advantages and disadvantages of speculative storage.

D. Replacing Cash with Futures

Another strategy for allowing the producer to take advantage of rising prices is to sell

the cash grain at harvest and buy an equal amount in the futures market (long position). This places the producer in a speculative position and you should consult with your tax advisor prior to initiating such a strategy.

The downside to this strategy is that if prices decline very far, margin calls will be required to maintain equity in your margin account. Also, since the cash grain has already been sold, the producer will not benefit from any basis improvement.

There are a couple of advantages to this strategy. The producer does not incur storage costs since the grain is already sold. Also, the margin needed to re-own the crop in the futures market is only a fraction of the crop's actual value, which allows the producer to use the remainder of the cash to pay off debt, reinvest in the farm, etc.

E. Forward Cash Contract

A grain elevator, or feedlot, offers the producer a set price for the specified delivery date. After determining your storage and interest cost from harvest through the delivery date, it is rather simple to ascertain whether or not the forward contract is a worthy marketing strategy.

It is advisable to shop around to see who is offering the best forward contract price (strongest basis). Contrary to storing grain unpriced, forward contracting involves no price speculation since the price is fixed. Producers may also use this method as a way to move income into the next year for tax purposes.

F. Store Grain and Sell Futures (storage hedge)

The primary advantage of a storage hedge is that it locks in a general price level and reduces price risk, because the hedger is short the futures market (i.e. if prices decline, any loss suffered in the cash market will be roughly offset by a gain in the futures market).

A storage hedge protects against changes in the overall level of market prices, but still allows the producer the opportunity to speculate on the basis, and capitalize on a strengthening basis if it should occur. A producer might consider this alternative if he/she is satisfied with the general price level, but thinks they can add to that price by locking in a return to storage.

Review the storage hedge example, "placing the hedge" table, and the advantages and disadvantages of a storage hedge.

G. Forward Basis Contract

Both the price level and basis risk should be addressed in your post-harvest marketing plan. One method of managing basis risk is with a basis contract. This is an agreement between a producer and grain elevator (or feedlot) which specifies the cash price upon future delivery as being a fixed amount in relation to the futures price (above or below), thus fixing the basis.

Basis contracts eliminate the risk of the basis weakening but also eliminates the chance of further basis improvement. At the same time, the producer is unprotected against a decrease in the futures price. Other marketing tools such as a short hedge can be utilized in conjunction with basis contracts to manage price risk.

H. Sell Cash and Buy Call Option

Selling grain at harvest and buying a call option allows the producer to have downside price protection and the ability to take advantage of rising prices while also eliminating the cost of storage. If the futures price increases, you sell the call option and your profit is the difference in the value of the premium when sold and the cost of the premium when purchased. If the futures price decreases, you let the call option expire and your loss is limited to the cost of the premium when you purchased it.

Review the example of selling cash grain and buying a call option.

Call option premiums can be costly, but are often cheaper than storage and interest. Consult your tax advisor for current tax regulations regarding speculative losses on options.

I. When updating and revising your marketing plan near harvest time, analyze the post-harvest marketing strategies that you feel comfortable with and weigh their advantages, disadvantages, returns to storage if applicable, and anticipated net price you think you will receive with each strategy. Making an informed decision and sticking with your marketing plan will ease the transition from harvest-time stress to making a marketing decision much easier.

III. Potential Speakers

A. Extension economists
B. Local elevator managers

IV. Review Questions

1. To determine if there is an economic incentive to store grain (speculative storage), what information is needed?

   Answer: The cost associated with storage, an idea or forecast of how far cash prices might rise, and if the expected cash price increase is large enough to more than offset the associated storage costs.

2. Which strategy or strategies do not provide downside price protection?

   A. Storing Grain (speculative storage)
   B. Replacing Cash with Futures
   C. Forward Cash Contract
   D. Store Grain and Sell Futures (storage hedge)
   E. Forward Basis Contract
   F. Sell Cash and Buy Call Option

   Answer: A, B, and E

V. For More Details

Please refer to the following publications in this series:

Stephen Amosson, Jim Mintert, William Tierney, and Mark Waller. Knowing and Managing Grain Basis, RM2-3.0. Risk Management Education Curriculum Guide. Texas Agricultural Extension Service. June, 1998.

Craig Fincham, James Mintert, Mark Waller, and William Tierney. Introduction to Options, RM2-2.0. Risk Management Education Curriculum Guide. Texas Agricultural Extension Service.

Stan Bevers, Mark Waller, Steve Amosson, and Dean McCorkle. Developing a Marketing Plan, RM3-3.0. Risk Management Education Curriculum Guide. Texas Agricultural Extension Service. April 1998.

James D. Sartwelle, III, Edward Smith, Terry Kastens, and Daniel O'Brien. Selling Hedge with Futures, RM2-14.0. Risk Management Education Curriculum Guide. Texas Agricultural Extension Service. April 1998.

Post-Harvest Marketing Alternatives

Marketing Grain Post-Harvest

- Production risk - production not none with certainty
- Extends the producer's marketing season
  - ☞ Allows more opportunities to capture desired price

Some Post-Harvest Marketing Strategies to Consider

- Storing Grain (speculative storage)
- Replacing Cash with Futures
- Forward Cash Contract
- Forward Basis Contract
- Sell Cash and Buy Call Option
- Store Grain and Sell Futures (storage hedge)

Storing Grain (speculative storage)

- Places producer in a speculative position (grain is unpriced)
- Extends the marketing season
- Can take advantage of rising prices and strengthening basis
- Unprotected against falling prices and weakening basis
- To determine if there is economic incentive to store, producer needs to know:

  - ☞ Associated storage costs (handling, interest, etc)
  - ☞ A forecast or some idea of how far prices might rise
  - ☞ Will the price rise cover associated storage costs

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EXAMPLE - Considering storing corn.

- You anticipate basis will strengthen $.05/bu. from September to December, and another $.05 from December through March

- The market is offering $.18 to store until Dec. and $.20 to store until March

It is Sept. now	**Sept.**	**Dec.**	**Mar.**
Futures Price	$2.70	$2.88	$2.90
Expected Basis	-$.30	-$.25	-$.20
Cash Price	$2.40	$2.63	$2.70
Price Spread	---	$.18	$.20
Less Storage & Interest*	---	$.135	$.270
Return to Storage	---	+$.045	-$.07
Net Price after S&I	$2.40	$2.50	$2.43

* Interest calculated at 10% of Sept. cash price, storage is $.025/bu./month

- There is incentive to store through December (+$.045/bu.)

- No incentive to store through March (-$.07/bu.)

- Be aware that this method of comparison will often not show much of a return to storage

  - ☞ Make your own price forecast, consider seasonality
  - ☞ The bottom line is whether or not you think prices will rise enough to cover associated storage costs

Replacing Cash with Futures

- Sell the commodity and buy back on futures
- Speculative position - consult your tax adviser regarding IRS speculative loss rules

Advantages

- Allows opportunity to benefit from rising prices
- Avoids paying associated storage costs
- Margin money needed to “re-own” the crop in the futures market is only a fraction of the crop’s actual value

Disadvantages

- Provides no protection for falling prices (incur margin calls)
- Prevents producer from benefitting from any basis improvement (if it improves)

Forward Cash Contract

- A set price for specified delivery date.
  - ☞ Involves no price speculation since the price is fixed

- Determine storage and interest costs from harvest through delivery date
- Then decide if the forward contract is a worthy marketing strategy
- Shop around to see who is offering the best forward cash contracts (strongest basis)

Store Grain and Sell Futures (Storage Hedge)

- Locks in a general price level and reduces price risk
- Producer is short the futures market
- Speculating on basis
- May want to consider this strategy if:
  - ☞ You are satisfied with the general price level, and
  - ☞ You think you can add to that price with a return to storage
- Could buy a put option rather than selling futures

EXAMPLE Storage Hedge

- Corn producer thinking about a storage hedge for corn harvested in August.
- The local cash price today, in August, is $2.75. September futures is $2.95, thus the basis is -$.20. The December futures price is $3.10.
- Storage and interest from August through December is $.20.
- Based on historic basis data, the December basis is typically around -$.03.
- Producer could sell December futures at $3.10 in August and store until December.
- Assume the December futures price falls to $2.60 while the cash price falls to $2.57.
- The return to the storage hedge is as follows:

	Futures Market	Cash Market
August	sell Dec. futures at $3.10 And store grain	Cash price offer $2.75
December	buy Dec. futures at $2.60	sell cash grain at $2.57

Hedge Results		Return to Storage Hedge	
Cash grain price in December	$2.57	+ Diff. in Dec.- Sept. Fut.	$0.15
+ Futures gain/loss (3.10-2.60)	$0.50	+ Expected Basis Change (Aug.- Dec.)	$0.17
- Storage costs	$0.20	- Storage and Interest Cost	$0.20
= **Final price**	$2.87	= **Return to Storage Hedge**	$0.12

Forward Basis Contract

- Specifies the cash price upon future delivery as being a fixed amount in relation to the futures price (above or below), thus fixing the basis
- Eliminates the risk of basis weakening
- Prevents the producer from benefitting from further basis improvement
- Allows producer to benefit from rising prices
- But doesn't protect against falling prices
- Other tools can be used in conjunction with a forward basis contract to manage price risk

Sell Cash and Buy Call Option

- Selling the commodity eliminates downside price exposure
- The call option provides the opportunity the benefit from rising prices (should prices rise)
- The purchase of a call option gives the producer the right, but not the obligation, to buy the underlying futures contract at the specified strike price.
- If the futures price rises:
  - ☞ You sell the call option. Your profit is the difference in the value of the premium when sold and the cost when purchased.
- If the futures price falls:
  - ☞ You let the call option expire. Your loss is equal to the premium you paid for the option.

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EXAMPLE - Sell Cash and Buy Call Option

- A producer sold his corn for $2.75 in August (at harvest).
- March futures is $3.10. He buys an at-the-money call option for $.15.
- By February, March futures has risen to $3.70 and the call option premium has risen to $.60.

- Action and Result:

August	Sell cash corn	$2.75
	Buy March Call	-$ .15
February	Sell the Call	+$ .60
	Call option profit	$ .45
	Net Price Received	$3.20

What if prices had fallen ? Let the option expire, having no value. The net price received would have been $2.60, $2.75 minus the $.15 loss on the call option.

Other Attributes of Call Options

- Call option premiums can be costly
- Premiums are often less costly than storage
- You know your maximum loss - it's equal to the cost of the call
- Places the producer in a speculative position, consult your tax adviser

Which Strategy to Use

- Update and make necessary revisions to your marketing plan near harvest time
- Analyze the post-harvest marketing strategies you feel comfortable with
- Weigh their advantages, disadvantages, applicable returns to storage, and anticipated net price received
- Make an informed decision and stick with your marketing plan