Grain Producers & Risk Management:  
a Marketing Overview

By John Berry Agricultural Marketing Educator,  Penn State Cooperative Extension - Lehigh County

Row crop farmers are challenged by several sources of risk. These sources of risk include production, price, finance, legal, environmental, health, and government policy. The focus here is marketing risk. “Market Risk” is translated into English as – the risk that prices will fluctuate. We plant a crop expecting a harvest, and from our perspective, a rising commodity price is good. Declining prices, prices below break-even and price uncertainty are often viewed as not-good. This is price risk.

Farmers have several tools available when contemplating managing price risk. The most common tools are cash grain contracts, futures contracts and option contracts. The most significant and basic opportunity for managing price risk is the proper use of a revenue-based crop insurance product. The concept behind managing price risk is to establish a “safety net”. This safety net is intended to minimize the potential for financial loss. One important point to recognize is that minimizing the potential for loss usually comes at a cost. We must pay for these price risk management tools. Many farmers combine tools to achieve a balanced approach to price risk management.

What is Basis?

The price we get for our grains when we deliver them to our normal, local buyers is based on the Chicago Mercantile Exchange price. The difference between the CME price and the local price is called basis. Basis is all about where and when.

\[
\text{Basis} = \text{Local Cash Price - Futures Price} \\
\text{&/or} \\
\text{Local Cash Price} = \text{Futures Price + Basis}
\]

The reason for understanding our local basis is that basis is one signal telling us when to market a portion of our crop. I ask farmers to track local basis on at least a monthly schedule. Write it down and save this information. Over years we start to see a pattern of basis moves. When we are quoted a local price we need to check to see if the current basis is strong or weak (compared to normal for that month). A STRONG basis is suggesting the price offered is better than might otherwise be expected. A WEAK basis is signal from the market that they really don’t want our grain at this time.
**Trends and seasonal patterns?**

From watching over 20 years of farm commodity price levels – we see a definite seasonal pattern. This makes some sense. The buyers of our grains are most at risk of not getting sufficient supply during the late winter and early spring months. Depending on price levels, farmers are making decisions on what to plant for the coming season during this time frame. To entice sufficient planting, and thus harvest, potential prices tend to be highest for corn and soybeans during the February – June window.

Understanding this seasonal pattern and following current prices is one method to also get signals from the market on when to take the current price offer. The two charts below represent this concept. Both are from the University of Minnesota, Center for Farm Financial Management.

![Chicago December Corn Futures, 1990-2010 average](chart1.png)

![Index of Chicago November Soybean Futures, 1990-2010](chart2.png)

**Government programs?**

Current Farm Bill commodity price support programs are complex and require more space than we have here to get a complete understanding of their applications. Farm Service Agency personnel can help farmers take advantage of these opportunities.

**Crop Insurance**

Crop insurance, particularly revenue-based crop insurance, allows you to protect a specific price for your crop. For a more detailed discussion, see our publication on New York Field Crops [http://www.agmkt.state.ny.us/AP/cropins/Field_Crop_Insurance_for_2011.pdf]. Or visit our...
website at www.agmkt.state.ny.us/AP/CropInsurance.html. Also visit the USDA Risk Management Agency (RMA) website at: www.rma.usda.gov for fact sheets, policy updates and for a list of crop insurance agents selling insurance in your county.

O.K. – now what?
Every businessperson eventually becomes involved in finance, production and marketing. These three activities are essential to effective business management. While most farmers describe themselves primarily as producers, they also have to finance and market what they produce.

Fortunately, good producers can be good marketers because smart marketing begins with an idea of the cost of production. Managers who market without an idea of their cost of production can only concentrate on enhancing the price they get for their product. It’s like driving a car that only has a front window and no side or rear windows. As long as everything runs smoothly, it can be OK. But any setback must be handled with incomplete knowledge.

Those who market with an understanding of their cost of production can make decisions about what is an acceptable price, what price will cover certain critical costs, and what the risks are of not taking a price when it is offered. Using the analogy of the car, it provides front, side and rear windows so that the decision maker can make both offensive and defensive decisions.

The marketing plan described here is intended, first, to cover as many of the costs of production as possible and, second, to maximize the price received for commodities produced. Many farmers try to maximize price before they have implemented strategies to cover all costs. While marketing in this manner is the prerogative of the farmer, it is not the approach reviewed here. The marketing plan discussed here focuses on relatively simple and available strategies that can be used to increase income and reduce risk.

A Marketing Plan is a proactive strategy to price your grain that considers your financial goals, cash flow needs, price objectives, storage capacity, crop insurance coverage, anticipated production, and appetite for risk.

A business-oriented marketing plan includes the following three steps:
1. Estimate your cost of production and expected break-even price per bushel.
2. Determine your marketing plan - how much you are going to sell at what price.
3. Develop a follow-through plan.
Your Cost of Production

Effective producers can be effective marketers because smart marketing is aided by a thorough understanding of the production process. By analyzing the production process, managers are able to estimate costs of production. Each productive activity involves the use of inputs and services. By listing the activities, you can estimate prices to cover each activity and eventually the whole production process. A good cost-of-production worksheet should contain sections detailing the operating and ownership costs incurred in production. These details give perspective on which costs are cash costs and which are not. Cash costs are those expenses, such as seed and fertilizer that require cash to be paid to the supplier. Noncash costs include depreciation in equipment and land interest for owned land. An understanding of the nature of the costs (operating and ownership, cash and noncash) helps establish target prices.

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<tr>
<th>Cost of Production - Corn</th>
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<tbody>
<tr>
<td>Corn</td>
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<tr>
<td>Yield</td>
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<tr>
<td>Direct costs (seed, fert, chem, etc)</td>
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<tr>
<td>Machinery Ownership</td>
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<tr>
<td>Land charge</td>
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<tr>
<td>Total cost per acre</td>
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<tr>
<td>Cost of production</td>
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The marketing plan, no matter how good, may not be able to lock in prices that cover all costs of production. Key target prices that compensate for critical costs are important to have in years where opportunities to cover all costs are limited. In the absence of your own cost estimates, you can use published costs of production, available from Extension and other sources. However, these cost estimates provide only rough estimates of fixed and variable costs of production and do not have the detail necessary for personal business analysis and marketing.

The Marketing Plan

The primary objective of a marketing plan is to cover as many costs of production as possible. Use the cost-of-production estimate discussed above and begin to set target sales prices as follows:

1. Estimate the outcome of different pricing alternatives.
2. Determine a target and quantity to market.
Estimate different pricing alternatives.
Consider several marketing opportunities from cash sales to forward contracts to futures and options. Basis information for your local market is necessary to analyze the futures and options marketing alternatives. The result of considering all marketing alternatives is to arrive at expected prices for all marketing alternatives. These expected prices can be compared with the cost of production. Whether the current expected prices exceed or are less than the total cost of production, the decision becomes one of marketing a certain percentage of expected production now or taking a risk that a higher price can be obtained at a future date.

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<tr>
<th>Pricing Tools</th>
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<tbody>
<tr>
<td>1. Forward contract</td>
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<td>2. Sell futures contracts</td>
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<td>3. Hedge-to-arrive contracts</td>
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<td>4. Buy put options</td>
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<td>5. Forward contract and buy call options</td>
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<td>6. Getting fancy with options: selling calls to form a price window</td>
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Determine a target and quantity to market
Any time a manager is waiting for a higher price, the possibility of getting a lower price exists. From this perspective, a marketer needs to have both a defensive and an offensive strategy. The offensive position indicates that you will sell when the price rises to a certain level and you are able to cover pertinent costs. The defensive position is the price at which you will sell some of your production in an attempt to lock in income you might otherwise lose.

The target consists of a trigger price and quantity to sell for both an offensive and a defensive position. The trigger price is the price for each marketing alternative that will create a response from the marketer. When the expected price reaches the trigger price for either the offensive or defensive plan, a sale is initiated. The quantity you decide to sell under each plan determines how much of the expected production you will market at different times. Your goal is to maximize the price you receive while minimizing downside price risk.

The Follow-Through Plan
Once the target table is completed, the markets must be watched to determine when either trigger price has been reached. A key to effective marketing under this plan is to have a method of
following the markets. Futures prices can be tracked by having continuous market information delivered to your office, using daily or weekly closing prices, or giving your broker or elevator manager authority to conduct the trade. Because the trade will be initiated at an unknown time in the future, it is necessary to make arrangements that facilitate quick trading. Open any necessary accounts with a broker and banker. Have forward contracts ready to be signed and delivered. When a trigger is pulled, the decision should be easily implemented.

**Stick to your plan**
Because marketing is an emotional activity, it is important to have someone to keep you accountable to conduct trades at the predetermined triggers. If prices are moving up, the tendency will be to postpone pulling the trigger because a higher price surely is ahead. When prices are moving down, optimism says they will bounce back and you should wait for the rebound. This is not objective marketing. You set trigger prices in an attempt to capture an acceptable price without undue risk. Because you market only a portion at each target, the price expectations experienced at each trigger can be built into future targets.

Accountability can be obtained by having another person know and understand the marketing plan. Spouses are often in a good position to implement a marketing plan because they may not feel as attached to the production as the person producing the commodity. When the target is reached, your spouse can remind you to initiate a trade. Marketing clubs, brokers and business partners can also serve as reminders to trade. Giving authority to grain traders to initiate a trade at certain targets can also be a way of keeping to the plan.

**Aim at a second target**
Whenever a trigger is pulled, aim at a second target. Select both offensive and defensive trigger prices, along with quantities to be marketed. The process of setting a target, pulling the trigger at key points and aiming at another target repeats until all of the production is sold. Marketers need to keep track of what percentage of expected production is forward priced so that they do not oversell as they repeat the marketing plan. Portions of the marketing plan worksheet assist producers in tracking what percentage of expected production is already forward priced.

**The Marketing Plan: Pre-Harvest and Post-Harvest**
The marketing options discussed here are primarily pre-harvest opportunities. Pre-harvest marketing is a broad view of the market, trying to take advantage of early seasonal price tendencies. Post-harvest marketing is a practical approach to the current environment, adapting to market signals and incentives.

Post-harvest marketing choices are simpler. There are three choices: sell grain at harvest, hold grain in storage to sell later, and hold grain in storage and “sell the carry.”
The best assessment of carrying charges must consider interest rates and the cost of financing grain storage. There are three steps to the calculation: calculate the carrying charge; calculate a per bushel interest cost for your grain storage, and compare the size of the carry to your interest costs.

![Carrying Charges]

Market-determined storage costs are reflected in the price differences between, for example, December and March.

**Resources**

Learning to market your crop can take time. Marketing information resources include workshops and informational webinars. You can listen to the 6-part grain marketing webinars (slides plus voice) for New York producers on the NYSDAM website under the crop insurance program. At this same website, you can view a slide presentation on the type of crop insurance most applicable to your operation, or you can download the appropriate publication for your operation. Or you can call and we will mail you a hard copy of the bulletin you need. See: [http://www.agmkt.state.ny.us/AP/CropInsurance.html](http://www.agmkt.state.ny.us/AP/CropInsurance.html)

University of Minnesota grain marketing extension professor Ed Usset has written a new book on grain marketing titled, “Grain Marketing is Simple.” You can read about and order the book at: [http://edsworld.wordpress.com/](http://edsworld.wordpress.com/)

This publication was prepared with funding from the USDA Risk Management Agency and the NYS Department of Agriculture and Markets by John Berry, Agricultural Marketing Educator, in 2011
Marketing Tips

The concept described here is an attempt to introduce objectivity into the marketing process. Other things need to occur to market production successfully. The following tips should help make your marketing more successful.

- Don’t market all of your production at one time - especially anticipated production. Grain in the field is not as sure as grain in the elevator.
- Remember your strengths. Most farmers prefer production to marketing. Focus on production. Market as objectively as possible according to plans.
- Keep an eye on your financial position. Leverage and liquidity problems can wreak havoc on your finances and marketing plans. Having to sell to meet financial obligations is not part of the marketing plan and is not usually the best time to sell.
- Don’t get greedy. If you can lock in a profit, do it. It may not be the highest profit, but it is a profit.
- Remember profit is a return to risk. You cannot reduce all risk and still expect to excel in profit.

The Importance of Marketing

*Ed Usset – University of Minnesota*

The average farm earns 20-30 cents per bushel (including government payments).

Just 10 cents more per bushel could increase net income by 33-50%!

**Great marketing** is not finding the high price. It’s finding an extra 10-20 cents per bushel with a solid plan that avoids mistakes.