

## Can You Manage Risk?

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What would you say if I told you I knew the most I was going to pay for corn meal and soybean meal as well as the minimum I was going to be paid for milk for the next 12 months? Do I live in a dream world? No, it's called a marketing plan and it is possible to do it now. It involves working with the future markets and knowing your books. Sounds intimidating doesn't it? Actually, it's not that hard, it just requires some background information as well as spending some time with your records. The whole area is called price risk management and we will be spending a fair amount of time with it. The dairy industry is just entering this area and it will become more important as time goes on.

First, what is risk management? Every producer is exposed to risk. Most of the risk we deal with is price risk, however things like IPM also fall under risk management. For these articles though, risk management = price risk management. In other words, risk from rising grain prices (if you are a grain user) and risk from falling milk (or feeder) prices. For the most part, this risk can be managed. Many of you are doing one form of risk management by contracting your corn meal purchases. This is the simplest and easiest form of risk management, in other words, it is a good place to start! The question is, where do you go from there?

Why should **you** worry about risk management (or **who** should worry about risk management)? There are many reasons for this, here's a few. The biggest reason is that the days of stable milk and grain prices are gone. Why? First, demand for grain is growing rapidly, not only from the ag industry, but from commercial products as well. For example, the new packing pellets you see are corn starch based (to see if this is so, place a few in the sink and pour water on them, the corn based ones dissolve). We are also entering into the world of global markets. The demand for our grains throughout the world is growing. However, the vast majority of grain is still used for livestock production and this demand is growing as well. The largest users of corn and soybean meal are the swine and poultry industries. Bottom line is, you have to compete with the other industries for a shrinking pile of grain. We used to carry over enough grain to go just about one year with no new crops. Now we are seeing carry-overs of less than 60 days. Thus, any weather scare or major export is going to be quickly reflected in the market. **You are competing with every grain buyer/processor in the world.** They are using risk management for their purchases to lock in supplies as well as price. If you don't, your grain price will be like riding a roller coaster with no safety belt! As for milk prices, they are going to bounce around as well. Why? A big reason I heard was that since so much of the milk is being processed now, companies are building inventories when they can (price goes up) then when they are full, they quite buying (prices drop). Another potential is that just like other grains, milk price will follow

corn and bean price. This typically happens in the beef market (as feedlot margins drop due to high corn prices, the prices they pay for feeders goes down). Overall, we are going to be seeing a lot of price volatility in the future. The high prices (peaks) will tend to be higher and the low prices (valleys) will tend to be lower. There will be a lot of opportunity to take advantage of these peaks and valleys, but to do so takes a good marketing plan. Since we know we are going to be seeing these wide swings, here's a question for you: can you survive these swings? In the end, you should make the same (or a little more) money using risk management compared to doing nothing. Then why do it? Risk management can level out these peaks and valleys thus making cash flow more even. As for who should work with risk management? That's up to you, but everyone should have a marketing plan!

### **The basics of risk management.**

First, where do our grain prices come from (or, how does the Chicago Board of Trade and other trading floors work)? The Chicago Board of Trade (CBOT) was developed over a century ago for buyers and sellers of grains to meet. Basically growers would bring their crops to Chicago and sell them. Eventually it evolved to a point where growers either went themselves or paid someone else to sell a certain amount of their crop. This is basically what happens today. A grower calls in and says he has 100,000 bushels of corn to sell. A broker then sells it for them. The trading floor is basically like a giant auction. Prices are not set by the traders, rather they are 'discovered'. In other words, if someone is willing to pay \$3/bu for corn and someone is willing to sell them corn for \$3/bu, it is 'discovered' that corn is worth \$3/bu. The vast majority of trades are paper trades (delivery of the crop is never made), rather people use the trades to lock in a price. Another important part of the process are people called speculators. These people have only one thing in mind, making money. Speculators (also called 'locals') are important because they provide liquidity to the market. In other words, the speculators are the real risk takers. They are willing to be on the other side of a trade in hopes that the market will move in their favor and they can make a profit (for example you want to sell corn for \$3.05, a speculator will buy it hoping the corn price will go up). They add to the volume of the market as well. This is very important! If the market has high volume, then the prices 'discovered' reflect what the cash prices are doing. If the volume is low (as in the cheese and fluid milk markets), the prices will not be reliable. The world looks to the CBOT for grain prices. Ask any feed company and they not only know what the CBOT is, they probably also know what the closing prices for the day were! How much volume is needed for the market to reflect the price everywhere? I'm going to a shot in the dark here and say at least 5000 contracts need to be traded daily. Typically, corn and soybean trades top 75,000 total contracts per day *each*. From Jan – Apr 1997, there were over 6 million corn contracts traded and over 5 million soy bean contracts traded. When you figure

there are 5,000 bushels per contract, this means that 1.35 billion bushels of corn were traded on May 21 (volume has been very high lately due to the high demand, low stocks)! This means the entire years corn crop is traded every 6.4 days at this pace! All of the contracts traded are standardized. Corn and soy bean contracts are 5,000 bushels with a quality grade built in. Soybean meal contracts are for 100 tons. Each is written so that it is either delivered or picked up from a CBOT approved warehouse. As I said though, deliveries are almost never made/taken. Rather the trade is 'offset'. For example, you own 3 Dec corn contracts (15,000 bu), in other words you bought 15,000 bushels of corn to be delivered to you in Dec. Come Dec, you can either take delivery of 15,000 bushels delivered somewhere in the upper mid-West or you can sell 3 Dec corn contracts (you 'offset' your 'hedge' which is what most people do). Congratulations, you just completed your first 'hedge'! A 'hedge' is basically a strategy, you bought 15,000 bushels of corn in May thinking that the price of corn will go up between now and when you need it in Dec, in other words, you are hedging against rising prices. Come December when you 'offset' your 'hedge', you hope that the price is higher, thus you make a profit. It could be that the price went down though and you lost money. Don't worry about this right now, we'll go through examples!

The next important (and actually the most important) aspect of risk management is called the 'Basis'. The 'Basis' is really simple, but to make risk management work, you really need to be a 'child of the basis'! It is simply the difference between local cash price and futures price. Here's some more terms for you: 'over' and 'under'. When a 'basis' is called 'over', it means so much money plus the CBOT price. 'Under' means so much money below the CBOT price. For example if corn is said to be 30 over it means that the local cash price is 30 cents higher than the CBOT price. If CBOT corn is \$3 with a basis of 30 over, then local cash price is \$3.30 per bushel. The basis is typically very seasonal and varies with local and global supply and demand. As a grain buyer in central NY, we are typically working with a 'over' basis. The amount 'over' varies considerably though. Grain producers will work with both an 'over' and an 'under' basis depending on the time of year. This is crucial in CNY and may be a marketing scheme. Since we don't have much dry grain storage available, the basis is usually 'under' during the fall. This is because every grower is trying to sell all the grain as it comes out of the field. This time of year though, the basis for growers is usually 'over' since the local supply is low. As a grain buyer or seller, you can determine how much it will cost you to store the grain. If the cost of storage (called cost of carry) is less than the change in the basis and corn prices, you can make a management decision as to store or sell at harvest (if you're a grower) or buy and store (if you're a buyer). Working with the basis is much more complicated then this and we will spend a lot of time on this during a risk management workshop I'm putting together. One of the things I'm working on is trying to track the basis. As I get more of this information, it will begin appearing in the Digest. I would highly recommend you start tracking the basis in your area!

We are going to end up with a couple examples. Next month we'll look at the different futures contracts.

Examples: Buying December corn in May

Cash only dealing (no risk management or what most of you do now)

	Cash Price	
In May, Dec bid is	\$2.90	you do nothing
Dec	\$3.20	you buy corn as you need it.
Net	-\$0.30	you pay \$.30/bushel more by waiting (\$10/ton)

Bottom line, you pay \$3.20 for corn

Hedging without being a 'child of the basis' (very simple, but deadly!)

	Cash Price	Futures Price	Basis	
In May, Dec prices are	\$2.90	\$2.50	+.40	you buy a futures contract
In Dec, prices are \$3.20	\$2.70	+.50		you 'offset' your hedge.
Net		+.20	+.10	(current - contract basis in Dec)

In this case, hedging without knowing what the basis does hurt you. You end up paying more than you should have (\$3.20 cash price - .20 hedge profit + .10 increase in basis = \$3.10).

Bottom line is you pay \$3.10 for corn.

Hedging with being a 'child of the basis'

	Cash Price	Futures Price	Current Basis	Contract Basis	
In May, Dec prices are	\$2.90	\$2.50	+.40	+.40	you buy a futures contract with an option to lock in the basis at 40 over
In Dec, prices are \$3.20	\$2.70	+.50	+.40		you 'offset' your hedge.
Net		+.20	+.10		(current Dec basis - contract basis)

In this case, knowing the basis and knowing how the basis moves seasonally made you money twice. You netted 20 cents on your hedge as well as 10 cents on the basis (\$3.20 cash price - .20 hedge profit - .10 basis profit = \$2.90). If the basis remains constant (i.e., if the basis were always to stay at 40 over), then you can just work with hedges. But with the basis moving, if you aren't careful it will move against you and cost you money.

Bottom line is you pay \$2.90 for corn.

Don't be overwhelmed by these examples. We are going to be doing a lot more of these as time goes by. To really make any of this stuff work though, you need to have a handle on your feed costs, break-evens and how much grain you go through. The days of just picking up the phone and ordering a load of grain are gone.