CHAPTER 13

AN OVERALL PERSPECTIVE

BACKGROUND

The future markets can be powerful price and cost risk management tools. Advocates would argue that the still relatively minor direct use of the markets by participants at the producer level in the agricultural sector suggests a major need for extended and more effective educational programs. Skeptics would counter with the charge that the agricultural futures contracts do not fit the needs of many relatively small producers, that the contracts and trading procedures are not always appropriate, and that the futures markets either are not needed or should be changed in a significant way. In the dairy sector, where government programs have historically minimized producer-level exposure to price risk, new futures instruments are being offered and the dairy producer will need to learn to manage price risk. And in this and other sectors, critics argue that we do not need trade in futures.

A conclusion that embraces the postures of both the advocates and the skeptics is most likely the correct one. Most of our land-grant universities have conducted formal classes and extension educational programs during the 1970s, 1980, and 1990s on the use and application of commodity futures in managing exposure to price risk. Those educational programs have been supplemented by programs in the private sector coordinated and often subsidized by the commodity exchanges and by private advisory groups. *Still, surveys indicate that only a small percentage of agricultural producers use the futures markets or options on futures directly.* In the grains and oilseeds, the futures markets are important indirectly in making possible the extension of cash contracts for future delivery by elevators, exporters, processors, and other buyers. A survey of a sample of midwestern farmers by Shapiro and Brorsen (the study is listed in the references) estimated 11.4 percent of grain and oilseed production was being hedged directly in the futures and that an added 20.5 percent was cash contracted, with producers thus using the futures markets indirectly.

The indirect or secondary extension of the futures markets to producers is less widespread in the livestock commodities. It is only in recent years that significant use of cash contracts that have a price provision has come into procurement programs for

slaughter hogs. In many instances, however, only the cash futures basis is included, and the producer is still fully exposed to price risk and is, therefore, still a cash market speculator. At the cow-calf and stocker operator level, a vast majority of the stocker and feeder cattle are produced and sold with the producer operating totally as a cash market speculator and totally exposed to the risk of dramatic price moves. And as noted, the exposure to price risk in dairy products is just starting.

In a special March 13, 1987, survey, the Commodity Futures Trading Commission attempted to identify who held positions in cattle, hogs, and feeder cattle. Roughly one-half of the positions in live cattle, hogs, and feeder cattle futures were held by hedgers. With average monthly open interest at 82,773; 29,305; and 17,923 contracts for live cattle, hogs, and feeder cattle, respectively, in 1987, it is clear that only a small percentage of the livestock is hedged. If 41,500 of the live cattle contracts were held by hedgers, for example, that would amount to about 1,577 million cattle (38 head per contract). The cattle on feed in the 13 major feeding states totaled 9.24 million head on January 1, 1987, and was at 9.77 million head on December 31, 1987. At most, it would appear, 17 percent of the cattle on feed were hedged. The percentage would be less for hogs and for feeder cattle, and the situation is much the same in the late 1990s. Trading volume and open interest are still small compared to the size of the industry, and *Position of Traders* reports show only a modest hedger presence. *It appears most producers of livestock operate as cash market speculators.*

The rapid growth of financial futures raises the possibility of a second area in which indirect use of futures markets could be very important to producers, processors, and other business entities involved in the production, processing, and distribution of food and fiber products. In most instances, the individual entrepreneur will not use the markets directly to hedge against rising interest rates or the implications of changing exchange rates because of the size of the future contracts. The financial institutions will be looked to for action in the futures so that loans, for example, could be extended to borrowing clients that have a fixed rather than a variable interest rate. But very little is being done, and the agricultural sector—and especially producers—continues to absorb most of the costs associated with exposure to the risk of fluctuating interest rates.

It may be that there is too little competition to force bankers to change their policies. As long as they can operate on a margin and pass the risk back to borrowers, there is no major incentive to change. But another possible reason applies to producers as well. Neither the agricultural loan officers in the bank nor the producer is very comfortable with marketing and marketing issues. By choice they are production oriented—and this is especially true of the producer. *Perhaps it will continue to be the choice of many producers to sit on the tractor rather than at a desk in front of a microcomputer analyzing the markets and financial issues.* Against that possibility is the concern that it is not an informed choice but an unnecessary barrier thrown up against use of the markets that stops many producers—and their bankers. This book has tried to deal with that issue by showing that it is relatively easy to use the markets effectively and by pointing to the potential that is not being fully realized. In an era when the Internet brings information to our fingertips and when the "information revolution" is the only revolution we have, you would expect the users and potential users of the markets to be more amenable to their application.

The revitalization of options for the agricultural commodities in the 1980s and the rapid growth in options trade during the 1990s has the potential to change the situation. Using put options to establish a price floor on crops or livestock to be sold, or call options to place a ceiling on raw material costs, eliminates some of the major barriers

to the direct producer-level use of the futures. *The ever present concern about the opportunity costs of pegging prices that turn out to be too low or pegging costs that turn out to be higher than were later offered is eliminated. In addition, producers' concerns and perpetual problems with arranging for and managing margin accounts are eliminated.*

Use levels suggest that the options are not yet proving to be very attractive to producers, however. In recent years, during the early summer months, trade in feeder cattle options on the fall feeder cattle futures has been so thin and so sparse that using the options has still been difficult. Across a time horizon of four to eight months, it will be the producer and potential hedger of stocker and feeder cattle who will be interested in the put options on the distant futures. With an annual calf crop exceeding 30 million head across the past decade, it is clear that not many of the feeder cattle are being floor-priced using the options. Much of the open interest in the distant feeder cattle futures and options appears to be held by the feedlot complex looking to gain some protection against rising costs of feeder cattle, their most costly input. Speculators and traders arbitraging between the feeder cattle and live cattle options are involved, but their activity tends to be focused in the nearby contracts and the trade in the distant contracts is thin and often difficult to manage. The use of options by producers is more widespread in the grains and oilseeds, but would still account for only a small percentage of total production.

In terms of perspective, then, it appears that significant parts of agricultural production is still completed with the producers operating as cash market speculators. Much of the hedging that is done is by the minority of the very large producers. *That fact argues in support of continued progress in education, in understanding, in awareness of the potentials the markets offer, and in support of constant monitoring of any problems and needed changes in the contracts and in trading procedure.* In the remainder of this final chapter, the objective is to pull these needs and issues together into a total picture of the requisites of an effective trading program.

Much of agricultural production is still completed with the producer operating as a cash market speculator. The potential of the markets is not being realized, perhaps because there are still problems of understanding and negative attitudes on the part of potential users, or problems with the applicability and relevancy of the futures and options that are being traded.

THE TOTAL PICTURE

A recurring theme in this book has been the importance of both fundamental and technical analysis of the commodity markets and the complementarity of the two approaches. The successful commodity trader, whether speculator or hedger, must come to recognize the need for a dual approach to analysis of the markets. *The failure to do so contributes to the sparse use of the markets, to the frequent misuse of the markets, and to the inclination to misinterpret what is being accomplished as a mistake when the futures side of a hedge results in significant opportunity costs.* As the development proceeds, you are encouraged to keep in mind the treatment of the psychology of the market developed in Chapter 6 in detail.

In terms of specific dimensions of an overall orientation to the markets, perhaps the most important is the contrast between the infusion of new information in the fun-

damental and technical dimensions of the markets. *On the fundamental side, significant changes in the base of information, and certainly in the publicly available base of information, tend to come infrequently.* During the growing season for corn, the crop production estimates come monthly and the first estimation based on a survey of producers does not usually come until August.

Cattle on Feed reports for the seven major feeding states are released monthly. In the hog sector, the reports on the supply-side numbers are available only on a quarterly basis. There are no significant privately produced reports for hogs comparable to *Cattle-Fax* in the cattle sector which provide updates on information such as weekly placements and shipments from *Cattle-Fax* member feedlots.

From the perspective of an individual and relatively small producer, therefore, a formulated perception of a significant change in the underlying supply–demand or fundamental picture will often be slow to change. If a position—short hedge, long hedge, purchase of a put option—has been established in the market, it can take several days, weeks, or even months for individual producers to change their perceptions of the expected price direction based strictly on their access to and appraisal of the fundamental information.

In sharp contrast, information is constantly flowing into the technical side of the market. Not only do prices change and adjust constantly, and the price action is the technical dimension of the market, but price action also reflects the injection of both publicly available *and* privately held information. Earlier in the book, there was a discussion of the efficiency of the futures markets. Most research efforts support the idea that the futures markets typically reflect not only the publicly available information, but also the impact of much of the privately held information as the large commercial firms, who have their own information network, act in the markets on the basis of their privately generated intelligence. Further, the point has been made many times in the book that the large firms do attempt to hire and use capable analysts and market technicians.

What we have, then, is the specter of individual producers holding firm to their fundamentally based biases and perceptions while the market proceeds to make new price highs or price lows. By the time the perceptions change, a significant opportunity cost has been incurred as the market makes, for example, new life-of-contract highs and presents a technical pattern that confirms that a significant change in price direction has occurred. If short hedges are held firmly in place while the market adjusts and moves to new life-of-contract highs, margin calls accumulate, the producer has suffered a substantial opportunity cost, and the hedge is inevitably viewed as a mistake. *There can be little questions that the typical agricultural producer makes no distinction between the opportunity cost associated with a hedge that,* ex post, *was placed at prices too low and an actual loss such as selling cash product below the costs of production.* The producer becomes frustrated and tends to back away from the markets.

The essence of the argument here is that the user must chart the markets. In the many educational programs we have conducted across the years, it has been argued that recognition of a change in the direction of price trend is too late if one waits for it to "trickle down" and emerge in the form of a coffee shop consensus. Fast-moving markets can impose a heavy opportunity cost or move quickly away from a pricing opportunity. The decision maker cannot afford to let several days or even weeks slide past before recognizing what is happening.

A minority of decision makers involved in agricultural production have come to understand the importance of monitoring the markets and being prepared to act when the need is there or when an opportunity presents itself. But still too often, the response

by the majority of producers to the need to understand both the fundamental and technical dimensions of the markets and to monitor daily price action is "I'm too busy, I don't have time." That attitude is one of the reasons many still act as strict cash market speculators. There is the concern that understanding the markets is too difficult—and it is not. There is the argument that it takes too much time—and it does not. *What a bit of time and persistent monitoring and charting of the markets can do is offer more potential to improve the economic viability of the operation than a like amount of time and energy spent on further refinement of production technique and refinement of production-oriented skills.* If a producer reflects on this, takes a look, and still refuses to "get off the tractor" and manage the business, then that choice has to be honored, and that particular individual is expressing a preference for the cash market speculator role.

Without question, one dimension of the total picture being discussed here is the need to understand the importance of both the fundamental and technical dimensions of the market and how to manage exposure to price-risk management based on that understanding. There are times when being a cash market speculator is the right choice, times when being heavily hedged or protected via options is the right choice, and even times when price protection is taken at a loss relative to costs of the operation. The key is knowing when to adopt those various postures; both approaches to market analysis are needed in making those very important decisions.

In forming a total picture of what is needed to be effective in the markets, it is important to include both the fundamental and technical dimensions of the market. Neither, used alone, can be totally effective in a price-risk management program because the two approaches to analysis are complementary in their application.

Related to the capacity to recognize the importance of a broad approach to analysis, the issue of misuse of the markets emerges. Here, reference is not to the tendency for users to start as legitimate hedgers and then allow themselves to slide into speculation in the futures markets. That tendency is a problem and it is a misuse of the markets. *The objective here is to highlight the tendency to put reliance on the futures markets as a predictor of cash prices and to fail to recognize the importance of the constantly changing supply–demand balance.*

In earlier chapters, there is discussion of the supply response that can develop, even within the year, in most agricultural commodities. The possibility is especially important in the livestock commodities. Cattle can be placed on feed and moved to slaughter weights in as few as 80 days. With modern technology, improved feeding techniques, and superior genetic potential, a producer can have increased numbers of hogs to slaughter weights in less than nine months from the day the gilt is moved into the breeding herd. In terms of the biological dimensions, therefore, it is clearly possible to change the expectations of supply and the actual supply of cattle or hogs within the year in response to a price stimulus.

In the grains, oilseeds, cotton, and so on, the intrayear supply response will be less significant, but it is still important. Prior to planting, acreage can be switched from one crop to another if the producer's price expectations are more favorable for one crop versus another. Since one source of price expectations is the preplanting quotes on the harvest-period futures contracts, the possibility of responding to those futures-based price expectations is clearly present, and a change in supply is the result.

After planting, the capacity to respond is diminished. Fertilization and herbicide rates can be adjusted, however, and tillage practices can be designed to enhance yields. On harvested acreages near 60 million acres in soybeans and well above 70 million acres in corn, a yield increase of a few bushels per acre can change the total supply significantly.

Before extending discussion of the implicit argument about misuse of the futures price quotes, it is productive to review the discussion of Chapter 3 and the coverage of the psychological dimensions of the markets and of decision makers' behavior in Chapter 6. In Chapter 3, the concept of a *micro–macro paradox* was introduced. *At the micro or individual firm level, no single decision maker is able to exert enough influence on either the supply or demand side to influence price. But the combined or aggregate (macro) influence of all the individual decisions can bring a major change in the supply of corn, soybeans, or cattle.*

In Chapter 6, the tendency for individuals to follow the crowd—"the herd tendency"—was introduced. What looks good to several producers often looks good to their neighbor and there is a tendency for everyone to go along. Countless examples of this type of behavior can be documented. Surges in placements of cattle into feedlots are common. Hog producers continue to expand in response to earlier inflated price expectations even after a significant increase in supply is assured or has even been documented. When not blocked by government program restrictions, producers have been observed to make a huge switch from corn to soybeans or vice versa. The harvest-period price relationships are then effectively reversed in terms of per-acre profits relative to preplanting expectations.

The net result of all this is that any profit window that opens and offers the possibility of attractive profits to agricultural producers or processors will be quickly closed by the aggregate response of many relatively small producers. For the producer who responds to the price incentive and forward-prices the expanded production, there is no problem. If the supply response is larger than the market had anticipated, and the magnitude of the behavioral response is *very* difficult to anticipate, the price in the future time period will be driven down relative to the price that prompted the expansion. If price protection is set by hedges, options, or cash contracts, the producer is protected, and much of the economic pain of the price decline is transferred outside the agricultural sector to the speculator who is willing to accept the risk.

For producers who act on early price expectations and who do not hedge or contract and establish price protection, the outcome is very different. The aggregate response, if large enough eventually to drive cash price sharply lower, means the producer will sell any expanded production *and the original base of production at a lower price*. Herein lies the misuse of the markets. *Futures prices should never be used as price expectations and the production program expanded if much of the total production is not going to be forward-priced in either the futures market or via cash contracts*. Decision makers *must* understand the need for protection. If such is not the case, it is more appropriate to criticize the handling and management of the pricing program than to criticize the futures market for its periodic inability to accurately predict the magnitude of decision makers' response to a price incentive.

It is imperative that decision makers be aware of the price implications of an aggregate supply response in a setting where individual firms actions cannot influence price. Any response to a futures market price

incentive must be made with understanding of those aggregate influences and a willingness to get the prices established via hedging, options, or cash contracts.

An added and essential ingredient to the overall orientation being developed here is the much-discussed discipline. It helps little to understand the fundamental and technical dimensions of the markets, to appreciate the price implications of an aggregate supply response, and to adapt the price-risk management program to the risk preferences and abilities of the decision maker and to the financial capacity of the firm if there is no discipline in the application of the program.

In practice, traders use numerous rules in an attempt to bring discipline to their programs. Speculators keep reminding themselves and each other that "the trend is my friend." That simple rule amounts to the recognition that it is very difficult to trade successfully and profitably if the entry position is short in an upward-trending market or long in a downward-trending market. Following that simple rule in combination with a rule such as "look for as 3:1 advantage," which means never enter the market unless the potential gain is projected to be at least three times the apparent risk of loss potential, can help guard against undisciplined trading.

For potential hedgers, some of the technically oriented trading programs discussed in Chapters 4 and 5 will help. Moving averages take the subjective dimension out of the trading program. Point-and-figure charting techniques provide the same type of objectivity. Trying to make decisions on trades to be made and orders to be placed when the market is not open can protect against the temptation to get caught up in the emotions of the market. But an added step, one that has been mentioned several times in earlier chapters and one that should not be overlooked, is to "write it down."

A written plan should always be used. *A written three-party agreement that lays out the objectives of the program and the responsibilities of the producer, the financial institution, and the broker is needed.* When positions in the futures will be employed, provisions for credit for margins and who is to answer margin calls must be established. It is especially important that the role of the broker be delineated. With rare exceptions, it is preferred that the broker's role be restricted to the effective execution of orders—and most brokers that deal with hedging programs would prefer that approach.

The plan must encompass an adequate level of detail. In Chapter 4 and in Chapter 11 there was considerable discussion of selective hedging programs using bar chart signals. In Chapter 7 and again in Chapter 11, discussion of options strategies was extended to more sophisticated approaches that seek to improve, across some preselected price range, over a straight hedge or just buying a put. *The detail in the written plan must include a planned course of action in anticipation of market patterns that will require hard decisions and quick actions.* This is especially important if the price trend proves to be counter to that expected or the price ranges observed in the markets turn out to be wider than those anticipated in the marketing plan because the supply–demand balance registers unexpected changes.

On approaches to life-of-contract highs, for example, the written plan should include what will be done in the event of two consecutive closes at new highs. If short hedges are to be lifted, both the producer and the lender must understand the implications of being back in the posture of a cash market speculator, and the broker must faithfully execute the plan. And there must be agreement on what will be done if the market later turns lower. Making all participants party to the contract will help ensure

consistent and disciplined execution of the plan. *It is relatively easy to follow through on a preestablished plan as to what will be done in the event of new life-of-contract highs. It is next to impossible to handle that same development on a spur-of-the-moment basis.*

In the option-based strategies, one approach examined in Chapter 7 involved selecting a price range across which a particular option strategy would be applied. Outside that preselected range, the decision was to carry the risk associated with price moves outside the identified price range. But that decision should be backed up by a safety net provision if the financial viability of the firm could be threatened. A written plan is essential.

Selling a $60 put on hog futures when the price is expected to be well above $60 can generate premium income if prices do move higher. This is one approach to the use of options that has the potential to improve the net price compared to a straight hedge. But if an unexpected surge in supply pushes prices lower, the firm is doubly vulnerable below $60. Not only is there no protection against falling cash prices, but selling the $60 put will bring futures account losses and margin calls if the price drops into the mid-$50s and lower. The producer is losing in the cash market as prices drop, and selling the $60 put will bring losses of a comparable magnitude in the futures. *It is imperative that the price-risk management plan lay out in advance of the developments what will be done if futures prices drop below $60.* The put could be bought back, a cheaper put (such as $55) could be bought, or futures could be sold. As discussed in Chapter 11, there are many possibilities. *The important thing is to pick the alternative that fits the firm best and follow through with discipline.* The same need holds for the grains or oilseeds or any position in options on futures contracts.

In an effective and comprehensive marketing program, there must be a written plan that clearly delineates what is to be done and who carries the responsibility for action. Since the program is based on expectations of the direction of price trend and/or an expected price range, it is important to include provisions for action if the market does not behave as expected due to a supply response, a surge in demand, or some other unexpected development.

A FINAL WORD

Recently, a speaker suggested that the potential applications of options on agricultural commodities are limited only by our imagination. He was right, but there is a parallel.

The potential and applications of the futures markets (and indeed the options) are limited only by our lack of understanding—and imagination. *If we take the time to understand the fundamental and technical dimensions of the market, formulate designated plans to fit the needs of the firm, and follow through with discipline, that potential can be realized.* And, concurrently, there will always be a need to critique the contracts and exchange trading rules to make sure the protections are indeed present, the contracts will be effective, and trade is conducted with adequate protection for all potential users.

If you get to that point, the economic health of the agricultural sector can be ensured to a degree, and you have a better chance of being profitable. And on that optimistic note, we will close this edition.

USEFUL REFERENCES

B.I. Shapiro and B. Wade Brorsen, *Factors Influencing Farmers' Decisions of Whether or Not to Hedge*, Purdue University, Lafayette, IN, April 1987. The study provided information on the number of producers using the futures markets and how they were being used in the mid-1980s.

Gregory J. Kuserk, *Trading in Livestock Futures and Options Markets: A Survey of Traders with Open Positions on March 13, 1987*. Commodities Futures Trading Commission, Washington, D.C., February 1988. The survey provides detail on the type of trader holding positions and on the number of positions for a specific day.