

# **Special Procedures to Encourage and Facilitate Bona Fide Hedging by Agricultural Producers**



As required by  
Section 4p of the  
Commodity Futures Modernization Act of 2000

**U.S. COMMODITY FUTURES TRADING COMMISSION**

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## **I. Introduction**

### **A. Purpose of the Report**

The Commodity Futures Modernization Act (CFMA) of 2000 amended the Commodity Exchange Act (Act) to incorporate a new Section 4p that requires the Commodity Futures Trading Commission (Commission) to consider methods of facilitating increased access to futures and option markets by agricultural producers. Section 4p also requires the Commission to submit to Congress, within one year of the enactment of the CFMA, a report on the steps it has taken to implement the provisions of this section and on the activities of contract markets under this section.

Specifically, Section 4p (titled, “Special Procedures to Encourage and Facilitate Bona Fide Hedging by Agricultural Producers”) states that:

(a) **AUTHORITY.**—The Commission shall consider issuing rules or orders which—

(1) prescribe procedures under which each contract market is to provide for orderly delivery, including temporary storage costs, of any agricultural commodity enumerated in section 1a(4) which is the subject of a contract for purchase or sale for future delivery;

(2) increase the ease with which domestic agricultural producers may participate in contract markets, including by addressing cost and margin requirements, so as to better enable the producers to hedge price risk associated with their production;

(3) provide flexibility in the minimum quantities of such agricultural commodities that may be the subject of a contract for purchase or sale for future delivery that is traded on a contract market, to better allow domestic agricultural producers to hedge such price risk; and

(4) encourage contract markets to provide information and otherwise facilitate the participation of domestic agricultural producers in contract markets.

(b) **REPORT.**—Within 1 year after the date of the enactment of this section, the Commission shall submit to the Committee on Agriculture of the House of Representatives and the Committee on Agriculture, Nutrition, and Forestry of the Senate a report on the steps it has taken to implement this section and on the activities of contract markets pursuant to this section.

This report responds to the mandate of paragraph (b) of Section 4p. In this regard, the report represents an initial assessment of the Commission's programs and the activities of the futures exchanges related to the Commission's continuing obligation under Section 4p to consider issuing rules that will encourage and facilitate agricultural producers' use of futures and option markets for risk management. Accordingly, the report provides information regarding: (1) agricultural producers' use of futures and option markets; (2) a summary of the Commission's oversight program for agricultural futures and option markets; (3) a description of recent and current efforts by the futures exchanges to educate producers on the risk management benefits of futures and option markets; and (4) a discussion of the Commission's current activities concerning contract markets' accessibility to agricultural producers and possible future steps the Commission may wish to consider adopting to address the requirements of Section 4p.

In preparing this report, the views of the Commission's *Agricultural Advisory Committee* were solicited. The Agricultural Advisory Committee includes representatives of producer organizations as well as other agricultural interests. In addition, each of the commodity exchanges that operate agricultural futures and option markets was requested to provide written responses to the specific issues raised by the Congress in Section 4p.

***B. Summary of the Report***

This report examines the principal issues raised in Section 4p of the Act regarding procedures to encourage and facilitate bona fide hedging by agricultural producers. Specifically, the report addresses the concerns of Section 4p(a)(1) regarding procedures to provide for orderly delivery. For orderly delivery to occur, the delivery procedures of futures contracts should be well designed, clearly and comprehensively specifying the delivery points, delivery facilities, and other delivery specifications to ensure adequate deliverable supplies to minimize the susceptibility of futures markets to manipulation and to enhance hedging and pricing. Many

futures contracts are designed by futures exchanges to limit the number of delivery alternatives available to achieve consistency in pricing and to minimize basis risk. By restricting the number of delivery locations, the exchanges attempt to ensure that the futures price does not vary significantly due solely to changes in the delivery location being priced, thereby reducing basis risk. While, for physical delivery contracts, physical delivery is necessary for futures and cash price convergence, the ability to make or take delivery of the underlying commodity is not necessary to the successful use of such futures markets for hedging. Rather, hedging is most successful when the basis is both stable and predictable. With regard to storage costs, under the Commission's Guideline No. 1, exchanges are required to set storage and loading rates at levels that reflect rates charged in the cash market. The Commission has no authority under the Act to require exchanges to subsidize storage or loading rates or to require delivery facilities to subsidize futures-related business at the expense of cash-market business.

Section 4p(a)(2) relates to procedures that may facilitate participation in contract markets by agricultural producers. In order to enter into a futures position, any market participant must first post an initial margin deposit with the participant's broker. Restrictively high margin requirements and/or transaction fees charged by brokers would limit agricultural producer participation. Although minimum margins are determined by the futures exchanges, brokerage fees are not under the Commission's or the futures exchanges' supervision. Except with respect to security futures products at the customer level, the Act does not grant the Commission authority to establish margins for futures and option contracts, including those based on agricultural commodities. Accordingly, margins for agricultural contracts are set at the discretion of the exchanges and brokerage firms.

In considering the issues raised by Section 4p(a)(3), the report notes that U.S. exchanges have actively experimented with novel trading methods and contract sizes intended either to

directly encourage or to facilitate producer participation, including reduced contract sizes, electronic trading, and cash settlement. However, trading in many futures contracts with reduced contract sizes has been discontinued due to a lack of trading interest.

In regard to encouraging contract markets to provide information that would facilitate participation by agricultural producers, as provided in Section 4p(a)(4), the report outlines various regulatory functions and educational activities of the Commission and the futures exchanges relevant to producer use of the markets. Historically, the Commission has devoted significant resources to educational and informational activities. These efforts have included sponsoring informational meetings, conferences, and hearings dealing with a broad range of issues including, among others, futures delivery points, computerized trading, and over-the-counter derivatives. The Commission also provides assistance to domestic and international regulators through publications and training, and Commission staff participate as speakers, panel members and instructors at conferences, workshops and seminars dealing with futures markets and their regulation. In addition, the exchanges have significant educational programs to acquaint agricultural producers and other market participants with risk management uses of the markets. Finally, the U.S. Department of Agriculture (USDA) and many of the land grant universities offer considerable educational opportunities for agricultural producers in the use of futures and option markets for risk management.

The primary agricultural futures and option markets that are relevant to most U.S. agricultural producers are those for grains, soybeans, cattle, hogs, cotton and milk. Although futures markets constitute an integral component of agricultural markets, surveys of agricultural producers indicate that, in general, they do not make extensive use of futures and options for risk management purposes, unlike other industry participants. Instead, producers tend to benefit from these markets indirectly by relying on futures markets for price information, by using futures

prices as the basis for establishing prices for spot and forward contracts, and through marketing programs offered by producer cooperatives and merchants that use futures and option markets as integral components of their programs.

Commonly expressed explanations as to why producers do not directly participate more extensively in agricultural futures and option markets include an inability readily to make or take delivery, a limited ability to meet margin requirements imposed by the futures exchanges and perceived high cost of futures trading, and a lack of familiarity with the potential uses and benefits of futures and options for risk management. The concern that many producers lack an adequate understanding of futures and option markets has been recognized and is being addressed by educational programs offered, or sponsored, by the exchanges, the USDA, land grant universities, and the Commission. The concern that producers' inability to participate in the futures delivery process adversely affects the hedging utility of such markets for producers does not appear warranted, both in view of economic theory and considering the Commission's experience with these markets. In this regard, commercial entities, including agricultural producers, can use futures and option markets to effectively manage risk as long as the hedger's cash/futures basis relationship is sufficiently stable, irrespective of the delivery process or, indeed, whether delivery is even permitted. Futures markets are not intended to serve as merchandising vehicles, as delivery may be required only to ensure that futures and cash prices converge at the expiration of contract months. Finally, the financial requirements for participation in futures trading, such as margin requirements and broker fees, may in fact deter some producers from using these markets. However, these requirements appear unavoidable. Either they are needed to ensure the financial integrity of the marketplace and that traders meet the financial obligations associated with their positions, or they are not subject to control by the exchanges or the Commission.

### ***C. Conclusions of the Report***

Available data indicate that overall direct producer use of futures and option markets is relatively low, although many, mostly larger, farmers are regular users of the markets for hedging cash market positions. However, many producers benefit indirectly from active futures and option markets, either as members of cooperatives or through the price discovery and price basing benefits offered by futures markets. In this regard, the Commission's staff experience indicates that most segments of the cash markets for major agricultural commodities use the futures markets for price discovery and for setting cash market transaction prices. Many agricultural producers indirectly rely on futures and option markets, since their sales prices are frequently set by reference to futures or option prices.

There are several explanations for the relatively low level of direct producer participation in agricultural futures and option markets. A commonly expressed view is that low producer participation is a consequence of a lack of understanding concerning the economic purposes and functioning of the markets. However, other considerations appear to be equally important in explaining producers' reluctance to use these markets. Specifically, the cost and the availability of substitute risk-shifting instruments, governmental programs, and business practices that are beyond the control of the exchanges and the Commission also appear to be significant factors. Nevertheless, the exchanges have an incentive to encourage participation in their markets, which they accomplish through careful contract design, market surveillance and rule enforcement, and extensive education and information dissemination programs.

The Commission facilitates commercial use of the markets through vigorous enforcement of the Act and a flexible regulatory scheme that encourages exchange innovation to design contracts that meet the risk management needs of potential commercial users. The Commission operates an extensive market surveillance program that actively monitors the markets on a daily



basis to detect attempts to manipulate prices. It also reviews new contracts and amendments to existing contracts to assure that the contract markets are not readily susceptible to manipulation, and it regularly monitors the exchanges' compliance with the Act's requirements to deter manipulation and to prevent trading abuses. The Commission also operates an active law enforcement program designed to prosecute fraud and oversees an industry registration program for commodity professionals that seeks to police their activities.

Under the Act as amended by the CFMA, the Commission has relatively limited authority to require exchanges to modify contract terms. Based on the Commission's ongoing oversight, the terms and conditions of existing active agricultural futures and option markets do not appear to be in violation of any provision of the Act, or the Commission's regulations and policies thereunder. There do not appear to be any material impediments to use of the markets in connection with their primary economic purposes -- risk management and pricing. In addition, the Commission and the futures exchanges that it oversees has effective oversight programs involving routine market surveillance, speculative limit enforcement and procedures to detect trading abuses. The Commission also protects the economic functions of the markets through its active enforcement program—the effective investigation and prosecution of manipulative and abusive trading practices and speculative position limit violations.

The Commission and the exchanges also are involved in a wide range of activities that facilitate producer use of agricultural futures and options for hedging, consistent with the objectives embodied in Section 4p. In this regard, U.S. futures exchanges have well-established programs to educate potential market users about their products, and they regularly provide up-to-date information to market participants concerning the terms and conditions of their contracts through various exchange committees, seminars, and through their internet websites. These exchange-sponsored educational programs explain how futures markets work and the mechanics of

trading, as well as various trading techniques. Moreover, the USDA and land grant universities support, or offer directly, extensive educational programs for futures and option markets.

With respect to the Commission's future efforts relating to the objectives embodied in Section 4p of the Act, the Commission will continue to carry out its educational efforts and it will continue to actively participate with the USDA in producer risk management education. The Commission also will continue to maintain an active presence in the cash and futures markets in fulfilling the Commission's market surveillance and contract design oversight responsibilities, and will undertake additional efforts to increase producers' knowledge of the markets by consulting with the exchanges, academic researchers and the Commission's Agricultural Advisory Committee. Through these initiatives and ongoing activities, the Commission will seek to identify new programs, policies and rules that would further facilitate producer use of the futures and option markets. These efforts also will include Commission sponsorship of, and staff participation in, informational meetings, conferences, workshops, seminars, and hearings dealing with relevant issues.

## **II. Background on Agricultural Futures and Options**

### ***A. Description of U.S. Markets***

Formalized futures trading in the United States began with trading in corn, wheat, and oats on the Chicago Board of Trade (CBT) in the mid-nineteenth century. Subsequently, in the later half of the nineteenth century, other exchanges in New York, Chicago, Kansas City and Minneapolis commenced trading in other agricultural commodities, such as cotton, hard red winter wheat and spring wheat. Today, futures and options on major domestic agricultural products are traded on the Chicago Mercantile Exchange (CME), the Kansas City Board of Trade (KCBT), the Minneapolis Grain Exchange (MGE), MidAmerica Commodity Exchange (MCE) and the New York Board of Trade (NYBT), as well as on the CBT.

**Table 1**  
**Most Actively Traded U.S. Agricultural Commodity Futures Markets in 2000**

Commodity	Exchange	Contract Size	Trading Volume (in millions of contracts)	
			Futures	Options
Corn	CBT	5,000 bu.	17.1	5.1
Soybeans	CBT	5,000 bu.	12.6	3.8
Wheat	CBT	5,000 bu.	6.4	1.5
Soybean Meal	CBT	100 tons	6.3	0.6
Soybean Oil	CBT	60,000 lbs.	5.3	0.4
Live Cattle	CME	40,000 lbs.	3.6	0.6
Cotton No. 2	NYBT	50,000 lbs.	2.5	1.0
Hard Winter Wheat	KCBT	5,000 bu.	2.4	0.2
Lean Hogs	CME	40,000 lbs.	2.1	0.1
Spring Wheat	MGE	5,000 bu.	0.9	0.04
Frozen Orange Juice	NYBT	15,000 lbs.	0.7	0.2
Feeder Cattle	CME	50,000 lbs.	0.5	0.01
Oats	CBT	5,000 bu.	0.4	0.05
Frozen Pork Bellies	CME	40,000 lbs.	0.3	0.02
Rough Rice	CBT	2,000 cwt.	0.2	0.03
Milk	CME	200,000 lbs.	0.05	0.01

Source: Futures Industry Association

Futures and option contracts are traded on a variety of agricultural commodities, including grains (corn, wheat and oats), oilseeds and oilseed products (soybeans, soybean meal and soybean oil), livestock and animal products (live cattle, feeder cattle, live hogs, and frozen pork bellies), dairy products (fluid milk, butter, dry whey, and non-fat dry milk), citrus (frozen concentrated orange juice), fibers (cotton) and food staples (rough rice). The contract sizes and trading volumes for the most actively traded agricultural futures and option contracts in calendar year 2000 are shown in Table 1.

Futures and option exchanges carry out all functions needed to operate their markets, including the development and marketing of new contracts, formulating amendments to the terms and conditions of existing contracts and surveillance of the markets. The exchanges'

boards of directors, who are elected by the members/shareholders, are the principal decision makers for U.S. commodity exchanges.<sup>1</sup> The members/shareholders of the exchanges represent broad segments of the industries associated with the listed futures contracts, including commercial firms that produce, buy, sell or process those underlying commodities.

For the agricultural futures and option markets listed in Table 1, the principal participants, as indicated by share of open interest, are commercial users. However, the principal commercial users in these markets typically are not producers; instead, the vast majority of the commercial open interest is held by non-producer entities such as merchants, processors and exporters. For example, recent large-trader data<sup>2</sup> reported by the Commission for the NYBT's cotton futures and option market indicates that cotton merchants held reportable futures or options positions amounting to 33 percent of the total long open positions and 25 percent of all short open positions in the futures and option markets combined.<sup>3</sup> Cooperatives represented 8 percent of both long and short open contracts. Mills with reportable positions were moderate users of these markets, holding 4 percent of the long side of the market. Commodity pools held 18 percent of the short side and 3 percent of the long side of the market. Producers with reportable positions held only 1 percent of short side open interest.

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<sup>1</sup> Until recently, all but one of the major U.S. commodity exchanges were organized as non-profit corporations wherein the members of the exchanges elected the Board of Directors (the Kansas City Board of Trade was organized as a closely held "for-profit" corporation in 1973). In 2000, the CME changed its organizational format to a for-profit corporation (a process termed "de-mutualization"), with shareholders rather than members electing the Board of Directors. In addition, the New York Mercantile Exchange recently implemented a de-mutualization program for that exchange. Other U.S. exchanges currently are considering whether to convert to for-profit corporations.

<sup>2</sup> The Commission requires futures commission merchants and other market intermediaries to report positions of all traders holding a position in excess of a specified amount. For the cotton futures and option contracts, for example, positions that exceed 50 contracts (the equivalent of 50,000 bales) must be reported to the Commission. These data are used for market surveillance purposes and the enforcement of speculative position limits. The data also are the basis for the Commission's weekly "Commitments of Traders" reports.

<sup>3</sup> Cotton merchants and cooperatives merchandise the majority of the U.S. crop and they are active participants in the futures and options markets. Merchants are the largest distributors of cotton and perform all functions involved with moving cotton from farms to mills, and engage in many futures strategies.

## ***B. Definitions***

A futures contract is an agreement to buy or sell a specified amount of a commodity at an agreed-upon price at a specified future date. Typically, the terms and conditions of exchange-traded futures contracts in a particular commodity are standardized, so that the only term to be negotiated in the futures market is the price of the transaction. Positions in futures contracts, once established, may be closed prior to expiration by entering into an equal but opposite transaction, or the position may be held to expiration. Depending on the terms of the contract, futures contracts are settled either by physical delivery or via cash settlement using a specified cash settlement price. Physical delivery contracts include detailed rules specifying delivery procedures and requirements that traders making or taking delivery must comply with in order to complete the delivery process.<sup>4</sup> Most exchange-traded agricultural futures contracts, including those for grains and cotton futures contracts, call for physical delivery. Currently, cash settlement is used in the lean hogs, feeder cattle and milk futures contracts. Cash settlement prices typically are based on publicly available cash prices reported by third parties, such as the USDA.

An option contract gives the holder the right, but not the obligation, to buy or sell a commodity at a specified price before a given date. Options that convey the right to sell a commodity are known as “put” options, while options that convey the right to buy a commodity are known as “call” options. The price at which the commodity underlying the option may be sold (in the case of a put) or bought (in the case of a call) is called the “exercise” or “strike”

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<sup>4</sup> Long traders are persons that hold positions that consist of open contracts they have purchased, while short traders are those that hold positions that consist of open contracts they have sold. Open contracts are those that have been established, but have not yet been liquidated through either a closing transaction (e.g., a short trader would liquidate the position by purchasing an equal number of contracts), or by making or taking delivery.

price. A futures option contract gives the buyer the right to either buy or sell an underlying futures contract.<sup>5</sup>

All active exchange-traded agricultural option contracts are futures option contracts; i.e., exercise of the option contract results in the establishment of a position in the underlying futures contract. The vast majority of these contracts specify American style exercise procedures that allow an option to be exercised at any time prior to its expiration date.<sup>6</sup> Upon exercise, buyers of put (call) options are assigned short (long) futures positions, and sellers of put (call) options are assigned long (short) futures positions.

Typically, agricultural option contracts based on physical delivery futures contracts expire prior to the delivery period for expiring futures contract months. In such contracts, option positions typically must be exercised before the first day on which delivery may be made for expiring futures contract months. Option contracts based on cash settled futures contracts are usually held and exercised closer to the expiration of trading in the underlying futures contract.

The value of an option (its “premium”) reflects the expected return from exercising the right to purchase or sell the underlying futures contract before the option expires and disposing of the futures position obtained. If the futures price changes in favor of the option holder, a profit may be realized either by exercising the option or by selling the option at a premium that is greater than the premium originally paid by the purchaser. If futures prices change in a direction that makes exercising the option unprofitable, the option holder simply allows the option to expire. Options provide protection against adverse price movements, while allowing the option holder to gain from favorable movements in the cash price. In this sense, options provide

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<sup>5</sup> Traditional (non-futures) options on physical contracts may be exercised into a position in the underlying physical commodity or may be cash settled based on a specified cash settlement price.

<sup>6</sup> An alternative type of option contract specifies European style exercise provisions that allow for option exercise only at the expiration of the option.

protection against unfavorable events similar to that provided by insurance policies. To gain this protection, a hedger in an options contract must pay a premium, as one would pay for insurance.<sup>7</sup>

### ***C. Margins and Clearing Houses***

In order to enter into a futures contract, a trader must first post an initial margin deposit with the trader's broker.<sup>8</sup> The margin deposits are good faith deposits that are intended to ensure that traders meet the financial obligations associated with their positions. The gains and losses in a futures position are settled daily, or "marked-to-market," into the margin account. Therefore, gains and losses on a futures position are added to and subtracted from the buyer's and seller's accounts on a daily basis until the position is liquidated.

Every futures exchange trading agricultural futures contracts has a clearing house or clearing association that is either a separate non-profit corporation or a division of the exchange. For example, the clearing house for the CBT is the Chicago Board of Trade Clearing Corporation, an independent non-profit corporation.<sup>9</sup> The clearing house is both the counterparty to and a guarantor of every futures trade. In other words, it acts as a buyer to every seller, and seller to every buyer. Therefore, the legal obligation of a futures contract rests on the clearing house. Both the margining system and the clearing house help to protect and maintain the financial integrity of futures markets.

### ***D. Regulation***

The activities of U.S. commodity futures and option exchanges are subject to the requirements of the Act. The Act authorizes the Commission to oversee the exchanges and other

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<sup>7</sup> A primary distinction between option and insurance contracts is that insurance contracts generally require a proof of loss, while options do not.

<sup>8</sup> The futures exchanges set the minimum margin requirements for each futures contract they list for trading. The minimum margin requirements for hedgers often are less than those specified for speculators.

<sup>9</sup> At the CME, the clearing house is a division of the exchange.

entities, such as futures commission merchants and commodity pool operators. The Act's primary goals include protecting the marketplace through the prevention of price manipulation or distortion and protecting all market participants from fraudulent or abusive trading activity and sales practices, and misuses of customer assets.

The Act was substantially amended on December 21, 2000, when the CFMA was enacted. The CFMA established two tiers of regulated markets, designated contract markets and registered derivatives transaction execution facilities (DTEFs).<sup>10</sup> Currently, there are no DTEFs that trade agricultural commodities. The CFMA also profoundly altered Federal regulation of commodity futures and option markets to promote innovation, maintain U.S. competitiveness, and at the same time reduce systemic risk and protect customers. In this regard, the CFMA provided U.S. futures exchanges greater flexibility with which to respond to the competitive challenges brought about by new technologies and international competition by replacing the "one-size-fits-all" regulation of futures markets with broad, flexible "core principles."

Under the Act, futures exchanges have much discretion in setting contract terms and conditions, including delivery points and quality specifications, provided that the contract as specified is not susceptible to manipulation. The Act gives the Commission relatively limited powers to intervene in the operations of commodity exchanges. These powers generally can only be implemented in special circumstances. For example, the Act authorizes the Commission to make changes to contract terms and conditions only when such terms and conditions violate the Act's requirements. Thus, in general, the Act permits exchanges to conduct their business

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<sup>10</sup> In addition to designated contract markets and DTEFs, the Act specifies two categories of markets that are exempt from regulation—exempt boards of trade and exempt commercial markets—which are applicable to non-agricultural commodities only.



activities as they deem fit, provided that they meet the standards of core principles relating to, among other things, prevention of manipulation and trading abuses.<sup>11</sup>

### **III. Producers' Use of Futures and Option Markets.**

#### **A. Economic Functions**

The primary functions of agricultural futures markets are hedging and price discovery. Hedging is accomplished by entering into transactions on futures and/or option markets that balance price risks associated with cash market positions. Price discovery in futures markets refers to the competitive determination of prices for a commodity in accordance with the rules and procedures of a commodity exchange. As such, futures prices commonly are used as reference prices to determine prices for cash market transactions in commodities.

##### **1. Hedging**

Hedging refers to the practice of reducing price risk associated with the production, marketing, and processing of a commodity by taking opposite positions in futures or option markets.<sup>12</sup> That is, a hedger seeks to take a position in the futures or option markets for a commodity that will increase in value when the value of the hedger's cash market position decreases. Specifically, hedging transactions typically involve selling futures contracts or buying put options when the hedger faces a risk of loss when prices decline, and buying futures contracts or buying call options when the hedger is trying to protect against the risk of higher prices.

Since agricultural producers face risks of declining output prices and increasing input prices, they may use futures or option contracts to hedge both types of risk. For example, a

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<sup>11</sup> Specific aspects of the Act's requirements and the Commission's regulatory program for exchanges are discussed in Section IV of this report.

<sup>12</sup> Commission Regulation 1.3(z) specifies, in part, that bona fide hedging consists of transactions in a contract for future delivery on any contract market, or any commodity option, where such transactions or positions normally

producer who plans to sell output (grain, livestock, etc.) at a future date may seek to reduce the risk that the product's price will fall before the planned sale date(s) by selling futures contracts or by purchasing a put option. If the output price declines prior to the expected sale date(s), the producer's short position will increase in value as futures prices decline, balancing some, or all, of the decline in the cash market value of the producer's commodity. Conversely, a producer who plans to purchase an input (feed, fuel, etc.) at a future date may wish to hedge against the risk that prices will increase before the anticipated purchase date(s) by buying futures contracts or by purchasing call options. If the input price increases prior to the expected purchase date, the increase in the cash price for the input should be partially or fully balanced by the likely rise in the value of the producer's long futures position.<sup>13</sup>

A key determinant of successful hedging by producers as well as other commercial entities is the extent to which futures prices are correlated with local cash prices. In general, the more highly correlated cash and futures price are, the greater the likelihood that a hedging transaction will protect a hedger against price risk. The relationship between cash and futures prices is commonly measured by the "basis," which is defined as the difference between the local cash price and the futures price. The effectiveness of a hedge position depends crucially on "basis risk."

Basis risk refers to the current uncertainty of the amount of difference between the cash and futures price when a hedge position is expected to be closed. The more that the basis at the time the position is closed deviates from the anticipated basis when the hedge was established, the greater the impact on the hedge and the greater the likelihood that the hedge will not

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represent a substitute for transactions to be made or positions to be taken at a later time in a physical marketing channel.

<sup>13</sup> In the Commission's experience, some producers, such as cattle feeders, may employ hedging strategies that involve taking both long and short futures positions. For example, trade sources indicate that cattle feeders typically establish short live cattle futures positions as hedges against cattle on feed, and establish long live and feeder cattle futures positions to hedge replacement cattle.

counterbalance the changes in value of the producer's cash position. Basis risk results from the fact that a producer's basis tends to fluctuate over time in response to unpredictable changes in the producer's local supply and demand conditions, which may not closely correspond to changes in supply and demand at the delivery locations specified for the futures contract.<sup>14</sup> A more stable basis usually implies smaller basis risk, or less risk in hedging with futures contracts. Thus, producers that hedge by establishing positions in a futures market are essentially replacing the underlying cash price risk (overall commodity price risk) with basis risk (relative price risk).

For futures contracts providing for physical delivery, the cash/futures basis relationship is a function of supply and demand conditions at the location of the commodity being hedged relative to the corresponding futures contract's par delivery point(s), the quality characteristics of the commodity being hedged relative to the quality deliverable on the futures contract, and the time until futures contract maturity. For example, for agricultural futures contracts, bases often vary by location due to differences in the cost of transportation from the futures delivery points to major assembly, storage, or export markets relative to local cash markets. To illustrate, on October 30, 2001, a corn producer located at Peoria, Illinois, which is a delivery point for the CBT's corn futures contract, would have had a basis of 2.5 cents per bushel under the expiring December 2001 corn futures price, whereas producers located at Marshall, Minnesota, and White Pigeon, Michigan would have had bases of 38.5 and 27 cents per bushel under the December corn futures price, respectively, on that same day. These differences may be due, in part, to the fact that corn producers in Peoria have ready access to the lower Mississippi River corn export points via low cost barge shipment, whereas corn in Marshall or White Pigeon must be shipped to export points via higher-cost railroad cars or trucks.

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<sup>14</sup> The basis narrows in response to predictable factors, such as a decline in storage rates or interest costs, as the expected sale date for the output approaches.

In addition to commodity price risk, which can be managed by using futures markets, agricultural producers also face production risk, which is not readily amenable to management by using futures markets. Production risk refers to uncertainty regarding the level of output that will be realized in the future. Production risk is attributable mainly to fluctuations in weather conditions. For producers using futures markets to manage price risk, the presence of production risk complicates their hedging decisions, because they may discover ultimately that they are over- or under-hedged if their realized production position is materially at variance with their futures position. In other words, there is a possibility that producers who use futures to hedge potentially could place themselves in greater risk by hedging than if they decided not to hedge.<sup>15</sup>

Academic research by Sakong, Hayes, and Hallam (1993) offers a potential solution to the problem of over-, or under-hedging. Their research shows that hedging with both futures and options are preferable to hedging with just futures when producers face both price and production risk. Their solution involves entering into a short futures hedge position for an expected minimum (i.e., worst-case scenario) production level, and then purchasing put options to cover the remaining position. The remaining position is the difference between the expected production level and the expected minimum level of production.

## **2. *Price Discovery***

Agricultural futures markets serve an important function in the pricing of agricultural products throughout the marketing chain, influencing transactions between producers, warehousemen, merchants, processors, and exporters. Cash prices for those commodities with active futures market are usually quoted at a basis to the futures price. Price discovery is an

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<sup>15</sup> It should be noted that some producers might decide not to hedge price risk because the prices they receive for their output and their production levels tend to be inversely related. This phenomenon is commonly referred to as “natural hedge.” A natural hedge exists in agricultural commodities such as grains where aggregate production levels and prices demonstrate a strong inverse relationship. Producers whose output levels are highly correlated with aggregate output levels have a reduced need to hedge price risk since when output is low, prices are high, and vice versa, thus keeping revenue relatively stable.

important function of agricultural futures markets, because the cash markets for many agricultural commodities are widely dispersed without a centralized, liquid cash market to rely upon for the determination of prices. By providing a centralized market, agricultural futures markets provide a means of discovering prices that can be used by cash market participants to base their bid or offer prices for commodities. In the absence of futures markets, merchants and other market participants likely would need to lower the prices at which they are willing to buy commodities from producers or increase the prices at which they would be willing to sell commodities to buyers in order to protect themselves against the risk of an adverse price change.

The price discovery function of futures markets also aids agricultural producers in making marketing decisions by providing information regarding likely changes in their own cash prices. Moreover, merchants, processors and other cash market participants use futures markets for the purpose of extending spot or forward bids to producers and for hedging any commodities purchased from producers. Therefore, producers do not need to hedge directly in futures and option markets to benefit from these markets because the typical spot and forward contracts offered to producers in many major agricultural commodities traditionally have been based on futures prices and depend upon the ability of the buyer to hedge in those markets. Moreover, agricultural lenders may require their producer borrowers to hedge directly with futures and options or indirectly with forward contracts in order to obtain a loan or a lower interest rate.<sup>16</sup>

### **3. *Physical Delivery***

As noted above, a trader may liquidate a futures position prior to its expiration by entering into an equal, opposite transaction, or the trader may hold the position until expiration where it is settled through physical delivery or cash settlement. The vast majority of the

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<sup>16</sup> Since the advent of options on grain and soybean-complex futures markets in the mid-1980's, buyers have been able to offer producers cash contracts with option components, e.g., a minimum-price contract that allows producers downside price protection while preserving some gain from upward price movements.

positions in physical delivery futures contracts are liquidated prior to expiration, with actual delivery typically accounting for less than five percent of the total volume of contracts traded.

A fundamental feature of physical delivery futures markets is that traders do not need to make or take delivery in order to take advantage of the hedging or price basing functions provided by these markets. Although the potential for, or threat of, delivery in futures markets ensures that futures prices reflect cash prices at contract expiration, most hedgers do not choose delivery. Generally, hedgers prefer to close their futures or option positions by executing closing transactions in the futures market sometime prior to the expiration of the contract.<sup>17</sup> The infrequency of delivery in futures markets does not affect the use of the market for hedging, since the cash/futures basis relationships for many local cash markets are sufficiently stable to ensure that hedging transactions will be successful under most circumstances.

Futures markets are not designed to be an effective means of merchandizing physical commodities. Futures contracts lack the marketing flexibility of cash market contracts in that futures contracts have standardized terms and conditions that do not vary from transaction to transaction whereas cash market contracts can be readily modified to satisfy the preferences of the buyer and seller. In addition, the delivery specifications of futures contracts are limited relative to the cash market in terms of the number of delivery points, deliverable qualities and other provisions. In fact, many futures contracts are designed by futures exchanges to limit the number of delivery alternatives available to achieve consistency in pricing and to minimize basis risk. By restricting the number of delivery locations, the exchanges attempt to ensure that the futures price does not vary significantly due solely to changes in the delivery location being

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<sup>17</sup> As discussed below, futures delivery of the commodity being hedged may not be feasible or desirable due, in part, to the fact that the terms of the futures contract usually do not satisfy the merchandising requirements of commercial entities.

priced, thereby reducing basis risk.<sup>18</sup> A consistent pricing basis enhances the effectiveness of hedge transactions and potentially increases trading activity in a market by making participation by hedgers more attractive due to reduced basis risk. Restrictions on futures contract delivery alternatives also reduce uncertainty to long and short traders as to the location of delivery as well as the quantity and quality of the deliverable commodity.

The exchanges' desire to limit the number of delivery points and deliverable qualities for purposes of attaining consistency in pricing and limiting basis risk must be balanced against the need to provide for adequate deliverable supplies to reduce the potential for manipulation or price distortion. Thus, the delivery points and deliverable qualities for a futures contract often are selected based on the volumes of the deliverable commodity available at given delivery points as well as the minimum number of delivery points needed and deliverable qualities to attain an adequate deliverable supply. In view of the foregoing, the opportunities for many commercial entities, including agricultural producers, to deliver their own product on futures contracts is limited, because most commercial participants are "not in position" to effect delivery.

For some agricultural futures markets, like live cattle, the approved delivery facilities (stockyards) operate with relatively open access. For other markets, like grains and soybean meal and soybean oil, the approved delivery facilities on the futures contract are owned and operated by firms that primarily use those facilities for their own commercial activities. Other market participants, including farmers, may not be able to gain access to those facilities for the purpose of making futures delivery. Rather than permitting a wheat farmer to make futures delivery through its approved grain warehouse, the warehouse operator may offer to purchase the

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<sup>18</sup> Prices for futures contracts that allow delivery at several delivery points can vary from time to time due to changes in the supply-demand conditions among the delivery points that cause changes in the location at which

grain from the farmer and then either deliver or merchandise the grain. Moreover, the opportunity to effect delivery is diminished because most futures exchanges require that traders, who also are operators of exchange-approved delivery facilities such as grain warehouses, meet high financial standards or other requirements in order to assure that futures delivery obligations are fully satisfied and to avoid defaults.<sup>19</sup>

As indicated above, futures and option markets are not designed to increase incomes. Rather, these markets may be used by producers and other entities to stabilize income over time. As discussed below, futures and option markets are just one of several alternative methods producers may use to reduce price risk and stabilize income.

#### ***B. Producers' Participation in Risk Management Activities***

Several surveys of agricultural producers have been conducted to ascertain the extent of producer participation in futures markets. These surveys indicate that producers do not, in general, make extensive use of futures and options for hedging purposes. The surveys indicate, however, that the use of futures and options for risk management varies among producers, with large producers tending to use these markets more than small producers and producers of certain commodities tending to use the markets more than producers of other commodities. In this regard, as discussed below, the Commission's large-trader data indicates that livestock producers

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delivery is economically feasible. This variation in pricing creates uncertainty as to the location being priced by the futures contract and increases basis risk for hedgers.

<sup>19</sup> Due to the high financial requirements specified in futures contracts, very few agricultural producers would likely qualify for direct access to the futures delivery process for most agricultural futures markets. One exception is the live cattle futures market, where cattle feedlot operators routinely make delivery on that futures contract. The delivery provisions of the live cattle futures contract differ from futures contracts for many other agricultural contracts due, in part, to differences in the structure of their underlying cash markets. In the cattle feeding industry, there are many large cattle feeding enterprises and virtually all cattle feeders sell cattle directly to slaughter plants, which are located in cattle feeding areas. In other commodities, such as grains or cotton, individual producers typically account for a much smaller share of total commodity production and sell a substantial share of their production to country elevators or merchants who, in turn, resell the commodity to other merchants, processors, mills or foreign buyers. Thus, futures contract delivery specifications for live cattle rely on deliveries by cattle feeders to assure adequate deliverable supplies whereas the grain and cotton futures contracts provide for delivery at locations (major storage locations or transportation centers) where relatively large quantities of product can be made available for delivery by merchants and other entities.



are important users of the livestock futures and option markets whereas producers of other commodities are not major participants in the markets.

A 1999 General Accounting Office (GAO) report provided survey information regarding the extent of farmers' use of various risk management tools. Using data from the USDA's Agricultural Resource Management Study (ARMS) for 1996, the GAO report estimated that no more than 25 percent of all producers engaged in hedging. The GAO report also indicated that large farmers (at least \$100,000 in sales) were twice as likely to hedge than small-scale farmers (less than \$100,000 in sales), 19% of small farmers compared to 38% for large farmers.<sup>20</sup> The report also provided information related to producers' risk management use of futures and options by commodity type: corn, wheat, cotton, other field crops,<sup>21</sup> beef and hogs, dairy, and poultry. The percentage estimates of farmers who used futures and options for hedging were 42% for corn, 23% for wheat, 46% for cotton, 24% for other field crops, 20% for beef and hogs, 18% for dairy, and 20% for poultry. The GAO report also examined producers' use of crop insurance and forward contracting, which may be substitutes for hedging with futures and options.<sup>22</sup> The GAO report found that only 13% of small farmers used crop insurance, compared to 58% for large farmers. Forward contracts were used by 25% of the small farmers, compared to 61% for large farmers.

Shapiro and Brorsen (1988) conducted a survey regarding the use of futures and options by Indiana corn and soybean farmers. The survey collected the responses of 41 farmers; 26 (63%) of them had used futures and options to hedge some of their cash positions over the

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<sup>20</sup> The percentages reported are point estimates. The GAO report also presented a likely range of percentage values.

<sup>21</sup> Other field crops include soybeans, rice, grain sorghum, barley, and oats.

<sup>22</sup> In that study, hedging referred to the purchase or sale of an exchanged-traded futures or option contracts.

previous five years.<sup>23</sup> However, this represented only 11.4% of the total acreage farmed. Rather than hedging with futures and options, the farmers used alternative means of risk management: 93% used government commodity programs; 32% had off-farm income; 24% had crop insurance; and 20.5% used forward contracts. The sampled Indiana farmers believed that using futures contracts helped reduce price risk and increase income. In addition, the survey revealed that highly-leveraged farmers were more likely to hedge using futures compared to farmers who were not so highly leveraged.<sup>24</sup>

Sakong, Hayes, and Hallam (1993) cited a survey of futures and options use by Montana producers. Interestingly, they found that options were more popular than futures to hedge price risk. Specifically, they found that 14% of crop producers used futures to hedge and 19% used options. For livestock producers, they found that only 6% used futures compared to 11% for options. Hanson and Pederson (1998) reported the results of a survey of mostly corn and soybean farmers in southern Minnesota. The survey, conducted in 1997, showed that about 74% of the respondents used forward contracts, 22% used futures contracts, and 18% used option contracts to control price risk. The survey found that the use of futures and options was equally divided between harvest hedges (i.e., establishing short futures positions before the grain was produced to lock in a favorable price at the time of harvest) and storage hedges (i.e., establishing short futures positions to protect against falling cash prices for grain in storage for a period of time after harvest).

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<sup>23</sup> Shapiro and Brorsen (1988) admit that the data they collected are both small and nonrandom, and therefore are not necessarily representative of the population of Indiana farmers. The farmers that participated in the survey were from a 1985 “Top Farmer Crop Workshop” at Purdue University. The sample of farmers was on average better-educated, operated larger farms, and likely to be better managers than a typical representative producer.

<sup>24</sup> Shapiro and Brorsen (1988) caution that the results of this survey may be biased. The bias results because at the time the survey was administered, the variability of corn and soybean prices were low and prices were close to the government support levels.

As a result of its experience from market surveillance and routine oversight of the futures and option markets, the Commission has an extensive understanding about the futures and option markets and the manner in which commercial traders use the markets for risk management purposes. As indicated below, this experience is partly reflected in the data routinely collected by the Commission on positions of large traders through the operation of its large-trader-position reporting program. Under this program, the Commission, by regulation, requires futures commission merchants and other entities holding trading accounts to submit data on positions that equal or exceed a specified level on a daily basis. These position data are reviewed by the Commission's market surveillance staff to identify traders who hold positions that may be a threat to orderly trading in the markets, including traders that could be in a position to manipulate futures prices.

While the Commission's large-trader reporting system is not designed to identify and analyze the trading activity of all traders, it does provide for some markets, primarily the livestock markets, information regarding the extent of agricultural producers' participation in the futures and option markets.<sup>25</sup> In this regard, livestock producers are major commercial participants in the live cattle, feeder cattle, and lean hogs futures markets. Recent large-trader data (October 2001) show that many cattle feeders actively participate in live cattle and feeder cattle futures and option markets. In live cattle futures and options, over 100 cattle feeders in the aggregate held 25 to 35 percent of the long and short open positions. In feeder cattle futures and options, about 60 cattle feeders held mostly long positions representing over 40 percent of the

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<sup>25</sup> The usefulness of the Commission's large trader position data for ascertaining the extent of producer use of futures and option markets is limited, in part, because positions are reported only for those traders that hold positions equal to or greater than the minimum position size ("reporting level") specified by the Commission for individual contracts. Since the reporting level varies from contract to contract, the extent of producer participation in futures and option markets as shown in large trader position data also may vary from contract to contract. Moreover, interpretation of these data also often requires considerable analysis to determine whether the primary business of the reporting entities is production of commodities or whether the entity principally is engaged in some other business activity.

open contracts. In lean hog futures and options, the Commission's large-trader data show fewer hog feeders with reportable-size positions. In October 2001, 15 to 20 hog feeders in aggregate held 6 to 9 percent of the long and short open contracts in lean hog futures and options.<sup>26</sup>

The Commission's large-trader position data for commodities other than livestock does not provide the same type of information since few producers of these commodities customarily hold large positions in futures markets and option markets that are large enough to be classified as large traders under the Commission's reporting system.<sup>27</sup>

As indicated above, producers who do not directly trade in the futures market may nonetheless realize meaningful risk management benefits from futures trading by other entities. In this regard, producers do not need to hedge directly in futures and option markets to utilize the price discovery and price basing functions of the markets, as spot and forward contracts are offered to producers based upon futures prices or option premiums. In addition, producers indirectly benefit from participation in futures and option markets through their membership in producer-owned cooperatives. The cooperatives, which either market commodities on behalf of their producer-members or purchase commodities from the producer-members for resale to other market entities, hedge their commodity inventories and forward purchases by establishing positions in the futures or option markets. For example, the Commission's large-trader data

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<sup>26</sup> This may partly be a result of the fact that relatively few hog feeding operations are large enough to carry reportable-size positions. For example, the 100-contract reportable level in lean hog futures represents over 20,000 hogs, whereas the 100-contract reportable level in live cattle futures represents about 3,200 steers. USDA data show that, in the year 2000, only about 2,100 hog feeding operations had more than 5,000 hogs—one fourth of the reportable level. Whereas, in the cattle market, over 9,700 cattle feedlot operations had more than 1,000 head—about one third of the reportable level.

<sup>27</sup> The usefulness of the Commission's large trader position data for ascertaining the extent of producer use of futures and option markets are limited, in part, because positions are reported only for those traders that hold positions equal to or greater than the minimum position size ("reporting level") specified by the Commission for individual contracts. Since the reporting level varies from contract to contract, the extent of producer participation in futures and option markets as shown in large trader position data also may vary from contract to contract. Moreover, interpretation of these data also often require considerable analysis to determine whether the primary business of the reporting entities is the production of commodities or whether the entity principally is engaged in some other business activity.

indicate that cooperatives are major participants in the CME's milk futures and option markets. Specifically, large-trader data for October 2001 show that reportable-size commercial traders held nearly 70 percent of long and short futures and option contracts. Prominent among these were several dairy cooperatives, most of which market milk on behalf of their producer-members. In addition, one major milk cooperative offers its producer-members the opportunity to sell as much as half of their anticipated monthly milk production through fixed-priced forward contracts. This cooperative is able to offer this benefit to its producer-members because it can hedge its risks with short futures positions on the CME milk futures market.

In the cotton futures market, cooperatives use futures to hedge fixed-price purchase and sale commitments with their members as well as their "on-call" transactions.<sup>28</sup> Programs for cooperatives' members include marketing pools, which aggregate similar qualities of member cotton and then routinely sell the cotton throughout the year in order to optimize the average price. Another sales method available to members is a call option. In this program, a producer fixes the price on part of the producer's crop before it is harvested, and prices it relative to a base quality.<sup>29</sup> When the cotton crop is harvested, the price is adjusted to reflect the actual quality of the farmer's crop. Cotton merchants also offer producers forward contracts and other purchase arrangements similar to the contracts offered by the cooperatives.

Grain and soybean producers also market their commodities through cooperatives as well as merchants. However, unlike the cotton and milk industries, relatively small amounts of grain

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<sup>28</sup> "On-call" sales and purchases are transactions for the future delivery of cotton where the basis rather than the price is fixed. The basis is related to a specified NYBT cotton futures delivery month. These transactions are routinely made between merchants and producers or merchants and mills. Typically, the producer or the mill would get to determine when the price for the cotton would be fixed.

<sup>29</sup> Cotton producers forward contract a significant portion of their cotton each year as a method of managing price risk. The percentage of the crop that farmers sell by forward contracting varies from year-to-year depending on price and yield. Forward contracts are generally written before planting occurs and relate to specific acres that a farmer will harvest. These contracts can be made at a fixed-price, where the grower locks in a price, or can be made as call contracts. As discussed above, if they are written as on call contracts, the farmer receives a fixed basis,

or soybeans are marketed through commodity pool programs, with most sales being spot or forward contracts. Cooperative marketing also is of extremely limited importance in the livestock industry.

**C. *Issues Affecting Usage***

Some maintain that the reason for the relatively low levels of producers' direct participation in futures and option markets include their inability to make delivery on futures contracts, an inability to meet the financial requirements of futures and options trading, and a lack of understanding as to how futures and options can benefit their businesses. Other common explanations offered as to why many farmers do not use futures and options extensively are the existence of effective, alternative price-risk or production-risk reduction methods and the availability of government income and price support programs. In addition, producers may elect to use several other alternatives to futures and options for risk management, including forward contracts, crop insurance, price/yield-support programs, and farmers may choose to deal with commodity production risk through income stabilization efforts such as off-farm income and leasing land.<sup>30</sup> Also, as noted above, some farmers may elect not to use futures and option markets for risk management because they are able to obtain income stabilization through the existence of natural hedging situations.<sup>31</sup>

Academic research by Pennings and Leuthold (2000) analyzed factors that influenced producer participation in futures markets. The authors used survey data and a particular behavioral choice model to identify factors that influenced a producer's use of futures contracts. Their survey included responses from 440 producers. The factors they considered were: risk

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which is set relative to a New York Board of Trade cotton futures delivery month. Under the on-call contract, the producer has the option of choosing when to fix the price prior to the expiration of the future.

<sup>30</sup> Some of the inherent risks in farming may also be reduced by spreading cash flows over time and by using credit reserves.

<sup>31</sup> See footnote 15.

attitude; perceived risk exposure; perceived performance; degree to which they had followed market prices (market orientation); level of understanding of futures markets; relative size of debt (debt-to-asset ratio); the opinion of family, friends, and advisors (decision unit);<sup>32</sup> and the degree of entrepreneurial freedom.<sup>33</sup> Of these eight factors, they found four to be statistically significant. The significant factors affecting farmers' decisions to use futures markets were the decision unit, perceived performance, entrepreneurial freedom, and level of futures understanding. The perceived performance was based on the decision unit's views and attitudes toward futures. Perceived risk exposure was a significant factor in some cases.<sup>34</sup>

The above-noted three reasons for agricultural producers' tendency not to participate in the futures and options markets are discussed in greater detail below.

### *1. Delivery Requirements*

A concern frequently voiced by producers is that agricultural futures contracts are not effective hedging tools if producers cannot deliver their own product on the futures contract. A related concern is that, for physical delivery agricultural futures contracts, producers cannot effectively hedge unless they have the ability to deliver. In this regard, these concerns have focused on the limited specification of delivery points, limited access to exchange-approved delivery facilities and the perceived high costs associated with making delivery (e.g., costs of storage, handling, inspection, etc.).

Concerns about delivery point specifications relate to the fact that physical delivery futures contracts specify delivery at relatively few delivery points, and that delivery at such

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<sup>32</sup> The decision unit referred to here is the person who made decisions for the farm/household.

<sup>33</sup> The authors also cite a survey of research papers that lists other factors affecting producer's decisions to use futures contracts. These other factors include: education, farm size, non-farm income, past experience, risk management, seminar participation, and more. Pennings and Leuthold (2000) make a distinction between hedging effectiveness and perceived performance. They claim that the latter, not the former, affects farmers' use of futures contracts.

<sup>34</sup> See Shapiro and Brorsen (1988).

points may not be economically feasible for many producers and other market participants because the cost of transporting the commodity to the delivery location is too high. In addition, producers have complained about limited access to delivery facilities due to the unwillingness of facility operators to accept their output for futures delivery.<sup>35</sup> Finally, some producers have indicated that the costs of delivery are excessive and unnecessary.<sup>36</sup>

As discussed earlier, for many physical delivery futures contracts, especially those involving grains and cotton, an economic rationale supports the limitation of the number of delivery points, delivery facilities, and other delivery specifications to enhance the hedging and pricing uses of the contracts. Moreover, for physical delivery contracts, while access to the futures delivery process is necessarily limited, the ability to make or take delivery of the underlying commodity is not necessary to the successful use of such futures markets for hedging. As noted above, from a theoretical standpoint, the only requirement for successful hedging activity is that the cash/futures basis relationship be relatively stable and predictable. The prospect of delivery is only necessary to assure that the futures price converges to the cash price as a contract approaches expiration. In general, the better the contract design and thus the closer the connection between the futures' delivery terms and cash market practices, the fewer the

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<sup>35</sup> Physical delivery of agricultural commodities on futures contracts is accomplished in one of three ways: (1) delivery of transferable warehouse receipts representing the deliverable commodity in storage in a regular warehouse; (2) delivery of shipping certificates entitling the holder to order load-out of the commodity at some time after the certificate is delivered; or (3) physical delivery upon expiration of the futures contract at or to a specified point.

<sup>36</sup> Delivery costs include costs related to receiving or loading out the commodity, storage fees, insurance charges, and the costs of inspections and weighing.



number of futures deliveries. In this regard, a large, disproportionate number of deliveries may indicate contract design flaws as experience suggests that traders tend to remain in a contract in large numbers until expiration to make or take delivery as a way to profit from futures contract anomalies. Thus, for well-designed contracts, relatively few deliveries are required to achieve cash-futures price convergence.<sup>37</sup>

In addition, in all active physical delivery futures markets including agricultural futures markets, commercial participants successfully hedge their price risk without making or taking delivery. Extensive use of futures contracts by substantial numbers of commercial entities, as shown by the Commission's large trader data, indicates that the basis is sufficiently stable or predictable for a large number of these entities to support widespread use of these contracts for hedging purposes. Moreover, it should be noted that some futures contracts, including several dairy and livestock contracts, specify cash settlement in lieu of physical delivery, and those contracts are widely used as hedging vehicles by various segments of the related industries. Thus, the allegation that hedging cannot be successfully carried out unless the hedger can participate in the delivery process is not supported in theory or by long-standing experience.

The concerns about access to delivery facilities relate to the fact that these facilities are under the control of the facility operators. In this regard, exchanges approve the facilities where delivery may be made. Exchanges do not impose restrictions on who may have access to the approved delivery facilities for purposes of delivery. Thus, access to delivery facilities largely depends on the ability of parties that seek to make or take delivery to negotiate appropriate

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<sup>37</sup> Well-designed futures contracts also provide for a sufficiently large deliverable supply of the underlying commodity to ensure that such contracts are not readily susceptible to manipulation by adopting appropriate delivery specifications, including an adequate number of delivery points. The importance of deliverable supplies and the number of delivery points for futures contracts was addressed in the Commission's November 1997 Order in regard to the establishment of additional delivery points for the CBT's corn and soybean futures contracts (See, 62 FR 60831).

arrangements with the delivery facility operator. The Commission's experience indicates that delivery facility operators typically do not accept for purposes of delivery on futures contracts any commodity other than those owned by the operators. Delivery facility operators' reluctance to accept commodities for delivery from third parties appears to be related to concerns that they will be unable to maintain effective control of the facility's storage or loading capacity and thereby be unable to use such capacity efficiently. The exchanges generally have not gone beyond the requirements of applicable law in setting standards for access to delivery facilities.<sup>38</sup>

In regard to concerns about the perceived high costs of making delivery, the Commission's earlier reviews of exchange submissions related to the fees assessed by delivery facilities for services such as storage and load out indicate that they reflect commercial practices at the delivery points for the futures contracts. In addition, the ability of individual delivery facility operators to arbitrarily increase fees for services such as storage or load out generally is limited by exchange rules in order to minimize the potential that such operators could adversely affect delivery receivers by arbitrarily increasing such fees. The Commission has approved exchange proposals regarding storage, load out and other delivery fees in view of the fact that they were consistent with the requirements of the Act.

## **2. *Financial Requirements***

Another reason given for producers' limited use of futures and options for hedging is that the financial requirements exceed the financial capability of individual producers. In particular, the need to meet margin requirements is said to discourage participation in the markets. The basis for this point of view is that entering a futures position requires that the hedger deposit and

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<sup>38</sup> Many warehouses eligible for delivery on the wheat, oats and rough rice futures contracts are licensed as public warehouses under the U.S. Warehouse Act. Nonetheless, the Commission understands that the U.S. Warehouse Act, as recently amended, does not require that licensed warehouses accept commodities from third parties. Adopting a

maintain adequate financial assets with a broker to satisfy minimum margin requirements set by the exchange and/or the broker. Margin deposits must remain in the trader's account as long as the trader holds a futures position, and they must be supplemented quickly in the event market prices move against the trader's position. The funds that are used for margining futures positions are not available for other uses and represent a commitment of capital that may be significant to producers with limited financial capacity. In addition, producers with limited financial capacity may find it difficult or expensive to obtain adequate financing to be in a position to supplement margin accounts in a timely manner when changes in futures prices significantly reduce the value of their futures position(s).

The margining system is used by futures exchanges worldwide and is considered to be a fundamental feature of such markets to ensure the financial integrity of futures trading. The futures margins are considered "good faith" deposits paid by the customer. The purpose for having futures margins is to provide a financial safeguard against defaulting on the contract. The minimum margins for futures contracts are determined by the futures exchanges and are based on the price volatility of the underlying commodity. That is, the more volatile the price of the underlying commodity, the greater the required margin amount. If margins are insufficiently low, futures exchanges face the possibility that traders will not honor their financial obligations as prices fluctuate. While exchanges set minimum margin levels for each commodity, brokers set the actual margin amounts paid by end users above these minimum levels.

Clearly, producers who intend to use futures markets for risk management purposes must have adequate financial capacity to meet margin requirements. The ability of producers to obtain such financing will depend, in part, upon their credit standing and financial position. In addition,

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requirement that exchanges allow producers access to delivery facilities in excess of that required by law may act as deterrent to the participation by potential delivery facility operators in the futures contract delivery process.

the willingness of financing entities to make credit available for purposes of hedging with futures will affect producers' ability to obtain adequate financing. Some lenders' reluctance to provide credit to meet producers' hedging needs may be due to lack of experience with financing hedging transactions. Thus, the establishment of appropriate educational programs for lenders may facilitate producers' access to credit for hedging purposes. For those producers without sufficient credit to support futures trading, participation in option markets may be an acceptable alternative means of hedging price risk. As indicated above, producers who purchase put or call option contracts to hedge their underlying cash market position need only finance the cost of the option premium at the time the option is purchased and are subject to no further financial obligation after that time.

### **3. *Level of Familiarity***

Another factor that is often cited to explain producers' limited use of futures and option markets is a lack of understanding of the economic functions of futures and option markets and how these markets can be used for risk management or other purposes. Historically, the view that producers do not use the markets due to their limited understanding has been associated with relatively low educational achievement levels of many producers as well as the inability of producers to obtain access to adequate educational resources and training programs. However, this situation has changed over time as older producers retire and are replaced by younger, more highly educated persons, many of whom have attended college or have received some training relative to futures and option markets. In this regard, substantial efforts have been made in recent years to provide educational materials and training programs for producers of many different agricultural commodities. As discussed in greater detail in Section VI below, the USDA has operated since 1996 a major program to educate agricultural producers on the purposes and uses of futures and option markets for risk management. In addition, as also noted

below, the Commission, the futures exchanges, and various educational institutions have sought to provide educational materials and programs for producers as well as the general public on the potential risk management uses of futures and option markets.

It should be noted that some criticisms about futures market relate to overall price levels of the underlying commodities, the structure of the cash market, or the economics of farming. These comments appear to be based on a misunderstanding of the economic purposes of futures markets. Futures markets are not suitable instruments for addressing agricultural income or marketing problems in the underlying cash markets beyond providing an alternative means of managing price risk and one potential way of stabilizing income fluctuations. In this regard and as indicated above, efforts to increase the accessibility of market participants to the delivery process by increasing the number delivery points likely will not result in increased prices for deliverers or lower prices for receivers and may negatively affect the utility of the contract for hedging purposes.

#### **IV. CFTC Oversight of Agricultural Futures and Option Markets**

##### **A. *Purpose of Market Oversight***

The primary objectives of the Act include the prevention of manipulation, abusive trading practices, and fraud. The Act also is concerned with ensuring that the integrity of the U.S. futures markets is maintained and that there is transparency in trading.

The Commission is the Federal agency that is responsible under the Act for ensuring that these objectives are satisfied. To meet its statutory obligations, the Commission operates a variety of programs. Specifically, the Commission operates programs that actively monitor the markets on a daily basis to detect attempts to manipulate prices and it reviews new contracts and changes in contract terms to ensure that the markets are not readily susceptible to manipulation.

In addition, the Commission monitors exchanges' compliance with the Act's requirements that they operate effective market surveillance programs to deter manipulation and enforce rules that are designed to prevent trading abuses. The Commission also protects the economic functions of the markets through its active enforcement program—the effective investigation and prosecution of manipulative and abusive trading practices and speculative position limit violations and oversees an industry registration program for commodity brokers and traders.

***B. CFTC Authority Under the Act***

The Act authorizes the Commission to oversee the activities of U.S. futures exchanges as well as futures industry brokerage firms. Recent amendments to the Act under the CFMA made substantial revisions to the Act's provisions, which included providing exclusions from regulation for certain commodities (primarily financial commodities and intangible commodities that do not have an underlying cash market) and allowed exemptions for futures and option contracts on non-agricultural commodities traded on certain types of exchanges. The CFMA also substantially deleted a requirement that futures exchanges submit for the Commission's prior approval all rule amendments to futures and option contracts, leaving only a prior approval requirement for amendments to futures and option contracts on certain agricultural commodities enumerated in the Act that are to be applied to open interest and that materially change the affected contract's terms and conditions. As required by the CFMA, the Act provides for the oversight of exchanges through the application of designation criteria and core principles.<sup>39</sup>

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<sup>39</sup> Regulation of the futures markets began with the enactment of the Grain Futures Act of 1922, which instituted regulation of the wheat, corn, and oats futures markets. Subsequent amendments to the law provided for regulation of other agricultural commodities that have traditionally been produced in the U.S, such as soybeans, soybean products, and livestock. In 1974, the Act was amended to provide for regulation of futures trading in all commodities.

In regard to the specification of contract terms, market surveillance programs and market information reporting requirements, the Act enumerates core principles that exchanges must comply with relating to the prevention of manipulation, monitoring of trading, enforcement of speculative position limits<sup>40</sup> and dissemination of information on prices, contract terms and trading mechanisms. For certain agricultural commodities, the Act also requires that exchanges submit for prior Commission approval amendments that materially change contract terms and conditions and that are to be applied to contract months that have open interest. The Act further provides that the Commission, in considering whether to approve proposed exchange rules, must consider the public interest to be protected by antitrust laws and must endeavor to take actions that are not anticompetitive.

To implement the above provisions of the Act, the Commission has adopted regulations and guidelines, and it has issued statements of acceptable practices for exchanges to use in specifying their rules and procedures to ensure that they are consistent with the Act's core principles. Specific parts of the Act and related Commission regulations, guidance and policies pertinent to the provisions of Section 4p are discussed below.

***1. Prior Approval Requirement for Rule Changes***

Section 5c(c)(2)(B) of the Act requires that exchanges submit for prior Commission approval any material amendments to the terms and conditions of contracts on specified agricultural commodities that are to be applied to contract months having open interest. This provision specifies that the Commission is responsible for determining whether an amendment is material. The futures and option contracts that are subject to the indicated prior approval requirement are the commodities listed in Section 1(a)(4) of the Act and include the major

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<sup>40</sup> The Act provides that exchanges shall adopt position limitations or position accountability for speculators, where

agricultural commodities produced in the U.S. and traded on U.S. commodity exchanges, such as corn, wheat, soybeans, cotton, and livestock. Commission Regulation 40.4 specifies the procedures exchanges are to follow in submitting amendments subject to the prior approval requirement and lists those rule amendments that the Commission has determined not to be material.

Prior Commission approval is not required for amendments to contracts on agricultural and other commodities that are not enumerated in Section 1(a)(4) and for amendments to contracts on enumerated commodities if the amendments are not to be applied to contract months with open interest. For amendments falling in this latter category, Section 5c(c)(1) of the Act provides that exchanges may implement such amendments after submitting to the Commission a copy of the amendments and a certification that the amendments comply with the Act and the Commission's regulations. Commission Regulation 40.6 specifies the procedures and requirements relating to the implementation of amendments submitted by exchanges under the Act's certification provisions. Under that regulation, exchanges may implement contract amendments on the next business day following the Commission's receipt of the exchanges' certification filings.<sup>41</sup>

To ensure that exchange certifications of amendments are correct, Commission staff reviews the amendments for compliance with the applicable requirements. In the event an amendment submitted under the certification procedures is found not to comply with the Act or Commission regulations, the Commission takes appropriate action to ensure that the contract's modified terms and conditions are brought into compliance.

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necessary or appropriate, in order to reduce the potential threat of market manipulation or congestion, especially with respect to trading during the delivery period.

<sup>41</sup> In emergency situations, exchanges must submit to the Commission appropriate certifications of amendments within 24 hours after the amendments have been implemented.



## **2. *Acceptable Practices for Contract Terms***

As noted, the Commission's Guideline No. 1 policy statement specifies acceptable practices for specification of contract terms and conditions to ensure that contracts will not be readily susceptible to price manipulation or distortion. The Guideline sets forth acceptable contract design practices for futures or option contracts providing for physical delivery or cash settlement, and for option contracts that provide for exercise into an underlying futures contract.

For physical delivery futures and option contracts, Guideline No. 1 specifies that the contract terms and conditions, as a whole, should provide for a deliverable supply that will make the contract not readily susceptible to price manipulation or distortion and that reasonably can be expected to be available to short traders and saleable by long traders at its market value in normal cash marketing channels. The Guideline provides that the terms and conditions of a physical delivery commodity contract, to the greatest extent possible, should reflect the operation of the underlying commercial cash market for that commodity.<sup>42</sup> In particular, the terms and conditions of the commodity contract should be designed so as to avoid any impediments to the physical delivery of that commodity. This will ensure that cash prices and commodity futures prices converge at the expiration of a contract.

Under Guideline No. 1, an acceptably specified commodity futures contract also should delineate all characteristics of the commodity that contribute to pricing for the par commodity,<sup>43</sup>

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<sup>42</sup> The Guideline recognizes that it may not be feasible or appropriate in all cases to conform each contract term and condition to cash market practices. Deviations from cash market practices may be necessary in cases where commercial practices vary widely for different segments of the industry or where a special term or condition is necessary to avoid impediments to the delivery process. Under the Guideline, any deviations in contract terms from commercial cash market practices should be carefully analyzed to ensure that such deviations would not cause the contract to become susceptible to price manipulation or distortion or significantly reduce the commercial utility of the contract for risk management and pricing.

<sup>43</sup> These include species, class, grade and similar characteristics with respect to agricultural commodities.

any quality differentials,<sup>44</sup> delivery points, any non-par delivery points and any associated price differentials for deliveries at non-par delivery points, eligibility requirements for delivery facilities, the size of the contract, the pack or composition of delivery units, the delivery instrument, the terms relating to transportation, delivery procedures, delivery months, delivery period, and inspection procedures. If multiple delivery points or deliverable qualities are specified and the values of the commodity differ between locations or qualities, an acceptable specification would include locational and/or quality price differentials that reflect any such value differences. In this regard, the Commission has adopted a policy on locational and quality price differentials that states as follows:

[T]o the extent possible, that locational and quality differentials contained in futures contracts reflect normal commercial price differences as represented by cash price differences while recognizing that in certain instances it may be necessary to set such differentials at a level which simply falls within the range of values which are commonly observed or expected to occur in the future.<sup>45</sup>

Under the policy, if the price relationships among delivery points are unstable and a fixed locational price differential is specified, the specified differential should fall within the range of commonly observed or expected commercial price differences.

In the case of cash settled futures or option contracts, Guideline No. 1 requires that the terms and conditions of the contract result in a cash settlement price reflecting the underlying cash market. In addition, the settlement price must not be subject to manipulation or distortion, and it must be based on a cash price series that is reliable, acceptable, publicly available and timely.

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<sup>44</sup> Quality price differentials account for the difference in value recognized in the cash market between various grades and classes of the commodity that are eligible for delivery in satisfaction of a contract.

<sup>45</sup> See, CFTC Guideline No. 1, 17 CFR part 5, appendix A; and Memorandum from Mark Powers, Chief Economist to the Commission, dated March 22, 1977, adopted by the Commission at its meeting of May 3, 1977.

### **3. *Margin Requirements***

Except with respect to security futures products at the customer level, the Act does not grant the Commission authority to establish margins for futures and option contracts including those based on agricultural commodities. Accordingly, margins for agricultural contracts are set at the discretion of the exchanges and brokerage firms. Typically, exchanges set minimum margin requirements to which brokerage firms must adhere. Brokerage firms may set margin requirements at levels above those specified by the exchanges.

Exchange minimum margin requirements are intended to maintain the market's financial integrity and typically are set at levels that reflect recent price volatility in contract prices. In establishing minimum margin requirements, exchanges typically differentiate between speculators and hedgers, and often provide for a lower initial margin requirement for hedgers. For example, the CBT, MCE, CME and the MGE, require an initial margin for hedge accounts that is roughly 75% of the value of an initial margin for speculative accounts, while the maintenance margin is the same for both types of accounts. Similarly, the KCBT's initial margin for hedge accounts is roughly 80% of the speculative account level, while the maintenance margin is the same for hedge and speculative accounts. The NYBT requires an initial margin for hedge accounts of roughly half the size required for speculative accounts, and a hedge maintenance margin that is roughly 70% of the level required for a speculative account.

### **4. *Requirements for Storage and Loading Fees***

Under the Commission's Guideline No. 1, exchanges are expected to set storage and loading rates at levels that reflect rates charged in the cash market. In this regard, if storage or loading fees are set at levels that do not reflect cash market rates, there is the potential that delivery on contracts would be unduly discouraged and contract prices could become distorted

relative to cash market price levels as a result. The Commission has no authority under the Act to require exchanges to subsidize storage or loading rates.

The Commission reviews any exchange proposals to establish or modify such fees for conformity with Section 15 of the Act. Section 15 requires the Commission to take into consideration the public interest to be protected by the antitrust laws and endeavor to take the least anticompetitive means of achieving the objectives of the Act. In this regard, a principal concern of the Commission and exchanges in limiting fees charged by warehouse operators is that holders of warehouse receipts potentially are vulnerable to exploitation by warehouse operators who are in a position to charge arbitrarily high fees for storage or loading commodities in storage.

To address this situation, exchanges have instituted maximum storage or load-out fees for agricultural futures contracts to prevent warehouse operators from taking advantage of captive buyers who hold warehouse receipts received through futures delivery. Although there are potential anti-competitive implications of the maximum storage and loading fees, the Commission has approved exchange proposals to establish maximum storage and loading fees on the basis that any anticompetitive implications of such maximum limits are outweighed by the need to protect market users from excessive storage or loading rates.

## **V. Exchange Initiatives to Encourage Producer Participation**

### ***A. Risk Management Education and Outreach***

Since the ultimate success of any commodity futures market depends upon its acceptance and use by commercial firms for hedging purposes, U.S. exchanges have an economic incentive to devote significant resources to facilitate such participation. This explains why U.S. agricultural commodity exchanges have had a long tradition of educating market participants

(and the general public) concerning the purposes and operation of their markets. It also accounts for the exchanges' continuing interest in maintaining the commercial viability of their contracts.

In the course of preparing this report, Commission staff solicited the input of five U.S. futures exchanges trading agricultural products regarding their current and anticipated educational efforts.<sup>46</sup> The exchanges indicate that their educational programs usually encompass printed materials of various types, including workbooks and home study courses that explain how futures markets work, the mechanics of trading, as well as various trading techniques. The publication and dissemination of market data, such as prices, trading volume and open interest, are also viewed by exchanges as vital tools for encouraging commercial market participation, because, as noted above, futures prices on agricultural commodities are widely used to discover market prices (price discovery) and as a means of establishing cash market transaction prices (price basing). Educational videotapes are also distributed by each of the exchanges.

In addition to publications and videos, three of the four responding exchanges sponsor educational seminars and workshops of varying length and complexity. Many of these are focused on the theory and practice of effective hedging by producers and others. The exchanges also maintain ties to the academic community and frequently provide training and training materials to college and university faculty.

Each of the exchanges providing input to this report emphasized the importance of providing up-to-date information to market participants concerning the terms and conditions of their contracts. This information, as well as some of the educational materials summarized above, is generally provided by the exchanges on their internet websites that have been

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<sup>46</sup> The Commission's staff solicited input from the CBT, CME, NYBT, KCBT and the MGE. The staff requested that the exchanges provide written descriptions of their efforts to conduct educational programs for agricultural producers on the potential uses of futures and options. Letters received by the Commission from four exchanges are attached below.

developed and improved over the last ten years. These websites provide a vast amount of information about exchange developments and contract terms as well as data on prices, open interest, trading volume and other items.

Considering prospective exchange initiatives, one of the exchanges that provided input to this report is currently developing, in partnership with the University of Illinois at Urbana-Champaign, an interactive, web-based educational course titled, “Introduction to Agricultural Futures and Options.” The goal of this project is to educate farmers about the purpose and use of agricultural futures and options. It is contemplated that, when completed, this tool will be made available to all farmers through that exchange’s website.

***B. Futures Exchanges’ Efforts to Ensure Commercial Utility***

The exchanges must meet statutory and regulatory requirements. As discussed in detail above, futures and option exchanges must meet certain requirements imposed by the Act and the Commission’s policies and rules, including the requirement that contracts offered for trading not be readily susceptible to manipulation. In general, contracts that are susceptible to manipulation or price distortion have limited hedging or pricing utility because the prices of such contracts are likely to be unreliable indicators of cash market conditions and prices.

In addition to meeting regulatory mandates, the exchanges have a substantial economic incentive to ensure that the contracts that they offer are useful for hedging and are commercially viable so as to realize trading volumes that are sufficient to cover the exchanges’ costs associated with product development and continued listing. As discussed above, ensuring that futures contracts are useful for hedging and not readily susceptible to manipulation is best accomplished by having terms and conditions that reflect those of the cash market of the commodity underlying the futures contract. Contracts that are not useful for hedging by commercial

interests (because they may not reflect current commercial reality) are unlikely to attract substantial trading interest. In turn, failure to attract trading interest will result in no income to the exchange from transaction fees, and no commissions to its members. However, the exchange will still be required to cover the administrative costs of listing such contracts as long as they are offered, and it will have borne the often significant costs of developing and marketing the products.

Finally, U.S. exchanges maintain sophisticated market surveillance systems, with the objective of maintaining orderly markets and responding in a timely manner to market problems. The realization of these objectives is vital to developing and maintaining market participation in general and commercial participation in particular.

***C. New Trading Methods and Contract Specifications***

Exchanges are constrained in their ability to offer futures and option contracts tailored primarily to producer use, either for hedging or as an alternative to cash market transactions. Specifically, in order to maximize the likelihood that a futures or option contract will trade successfully, contracts must be designed to be attractive to the expected market participants, which typically include commercial users from various segments of the underlying cash market as well as speculators. As a result, futures must specify cash settlement or physical delivery based upon commercial quantities of generally recognized (or official) classes and grades of widely traded commodities delivered through ordinary commercial channels pursuant to ordinary commercial terms and conditions. In addition, exchanges often limit the location and qualities of a commodity deliverable on a contract for the purpose of ensuring that the futures contract will have a consistent price basis and to reduce basis risk.

Nevertheless, over time, U.S. exchanges have actively experimented with novel trading methods and contract sizes intended either to directly encourage or to facilitate producer participation, including reduced contract sizes, electronic trading, and cash settlement. In this regard, the MCE, a subsidiary of the CBT, has traded for many years smaller-than-standard-size futures and option contracts for grain and oilseed commodities, with the specific intention of attracting producer participation.<sup>47</sup> Other exchanges have offered smaller contracts in the past, including the MGE grain contracts which, at one time, permitted trading in both round lots of 5,000 bushels (the most common size of grain futures contract in the U.S.) and “job lots” of 1,000 bushels. However, the MGE discontinued trading in these job lot contracts due to lack of trading interest. In addition, in recent years, the CME initiated, but has since discontinued due to lack of trading activity, trading in small-sized versions of its lean hogs and feeder cattle futures contracts, which are cash settled. These CME contracts were made available on its Globex electronic trading system. The CME also has attempted to trade, but has since de-listed, a small-sized version of its milk futures option contract. Nonetheless, while the exchanges’ trading experience with small-sized contracts has been mixed, there is a possibility that recent changes to the Act and the Commission’s regulations will encourage trading of contracts with small sizes using electronic trading systems due to the lower costs to exchanges of maintaining such markets.

***D. Maintaining Orderly Markets with Changing Conditions***

In addition to long-term responses to market conditions, the exchanges have emergency authority to respond to short-term crises. Emergency actions taken by exchanges have included

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<sup>47</sup> The MCE also historically traded, but recently has delisted, its small sized futures contracts in live cattle, lean hogs, soybean meal and soybean oil.



suspending trading, ordering trading for liquidation only, increasing margin levels, and reducing speculative position limits in the delivery month.

## **VI. CFTC Initiatives to Encourage Producer Participation**

### **A. History**

The 1974 amendments to the Act that created the Commission also contained an educational mandate. That provision, Section 18 of the Act, states in pertinent part that

The Commission shall establish and maintain, as part of its ongoing operations, research and information programs to...assist in the development of educational and other informational materials regarding futures trading for the dissemination and use among producers, market users, and the general public...

Consistent with this mandate, the Commission historically has devoted significant resources to educational activities *per se* and to informational programs in general. These efforts have included the sponsorship of informational meetings, conferences and hearings dealing with issues ranging from futures delivery points to computerized trading to over-the-counter derivatives. The Commission also provides assistance to domestic and international regulators through publications and training, and Commission staff participate *ad hoc* as speakers, panel members and instructors at conferences, workshops and seminars dealing with futures markets and their regulation.

### **B. Current Efforts and Activities**

In specific regard to agricultural producer use of futures for hedging, the Commission is currently actively involved with the USDA's risk management education initiative. The basis for this initiative is the Federal Agricultural Improvement and Reform (FAIR) Act of 1996, which requires the U.S. Secretary of Agriculture to provide, in consultation with the Commission, "such education in management of the financial risks inherent in the production and marketing of agricultural commodities as the Secretary considers appropriate." Consistent with this mandate,

in 1997 the Commission entered into a memorandum of understanding with USDA that establishes the basis for a joint Risk Management Education (RME) effort. This effort is intended to be broad in both scope and content, focusing on integrating basic information on risk management from all relevant sectors, including crop insurance as well as futures and options. The education effort is being directed toward two audiences: producers and third parties (such as insurance agents and commodity brokers) who deal directly with farmers on a variety of tools to mitigate risks. To initiate the education program, the agencies held a risk management education summit on September 16 and 17, 1997, which attempted to establish the basis for a consistent nationwide education effort.

Subsequently, the RME initiative has sponsored a large number of regional and local conferences, seminars, and workshops designed to expose as many U.S. producers, growers, and third parties as possible to the need for an understanding of the importance of, and the tools required to effect, agricultural risk management. In addition, under the auspices of the RME initiative, the USDA is funding a number of projects that will provide new RME curricula and innovative means of delivering risk management education to farmers. The results of one such project, the National Agricultural Risk Education Library, provide a convenient, internet-based clearinghouse of risk management literature. Commissioners who have represented the Commission on the RME Steering Committee that oversees this entire effort, along with designated Commission staff, have actively participated in these RME initiatives.

In a related effort, the Commission has provided input to the USDA relating to the development and operation of its Dairy Option Pilot Program (DOPP). The objective of this program is to give dairy farmers hands-on experience with exchange-traded risk management tools, specifically through the purchase of milk put options traded on the CME. Originally

limited to producers in selected counties in seven states, the program has been expanded to additional counties and states. The USDA reports that 425 producers purchased about 1,700 put options in Round-I of that program. The USDA subsequently implemented Rounds II and III of DOPP, which modified the program's provisions. Round III commenced in October 2001. The USDA subsidizes the costs of such purchases, both option premiums and commissions, under the program.

In addition to its efforts with USDA on risk management education, the Commission has itself undertaken a wide range of activities to help farmers and other interested parties understand the functions and operations of commodity futures and option markets. In 1984, the Commission established its Agricultural Advisory Committee to facilitate input from the agricultural sector concerning the newly authorized program for exchange-traded agricultural options. The arrangement was so successful that the Commission established a permanent charter for the Committee. Subsequently, the Agricultural Advisory Committee, on which all major agricultural producer groups are represented, has provided a useful forum for communications between the Commission and the agricultural community on a large number of issues. These include futures delivery points for grain contracts, settlement methods for livestock contracts, and the uses and abuses of "hedge-to-arrive" contracts.

Through its Office of Public Affairs, the Commission provides informational brochures, background reports, and specific information to producers as well as to the press and members of the public. Other units of the Commission's staff provide extensive legal and technical information in response to a wide variety of inquiries.

The Commission established a website on the Internet in October 1995 and has continued to add information of educational value to market users and potential market users. Among the

materials that may be accessed on the Commission website are speeches, press releases, commitments of traders reports and other economic reports, information on the Commission's reparations program (including information on filing a claim), and enforcement information. The site also contains links to other futures related sites, including domestic and foreign exchanges.

Finally, given the importance of U.S. agricultural futures markets to the pricing of many domestic agricultural commodities, as noted in a previous chapter of this report, significant Commission resources are continuously devoted to ensuring that those futures markets are manipulation free and that futures contract terms reflect current commercial conditions. An example that was discussed in detail above is the Commission's effort in the late nineties to revise the delivery provisions of the CBT's grain contracts. The contract revisions that resulted from this process should provide long-term benefits to farmers by reducing the susceptibility of these contracts to manipulation and congestion.

### ***C. Future Commission Efforts and Initiatives***

The Commission believes that vigorous oversight of the markets, including its active market surveillance program as well as routine review of exchange rules and practices to identify potential impediments to commercial use of futures markets, will help to foster producer participation by ensuring the integrity of the markets and their utility as risk management and pricing tools for the agricultural industry, including producers. Furthermore, the Commission will continue to provide advice and assistance to USDA in its efforts to educate agricultural producers in the use of risk management tools. To a large extent, this assistance will be provided regardless of future farm legislation as a result of the natural relationship that has existed between the two agencies since the Commission came into existence.

The Commission continuously endeavors to improve its website to make it more valuable to both market users and observers. One enhancement that is currently being considered is the addition of links to additional existing and future sources of information about agricultural commodity hedging. A potentially important set of such links consists of the operational hedging programs that have been and are being developed at land grant colleges and the exchanges.

Although the Commission does not directly provide agricultural producers with training in the use of futures and options for hedging, as noted at the outset of this section, both Commissioners and staff participate in myriad educational activities, many of which are well attended by producers.

***D. Related USDA and Academic Initiatives***

Even prior to the passage of the 1996 FAIR Act, during the mid 1980s, USDA had instituted a pilot program designed to familiarize grain producers with the use of exchange-traded commodity options to manage price risks. In addition, USDA has long subsidized producer use of crop insurance to manage production risks. Over the last decade, that program has expanded to include revenue insurance designed to deal with both production and market risks.

More recently, as noted above, USDA has devoted considerable resources to its risk management education effort, including the above-noted DOPP and the funding of diverse, education-related projects. Many of these projects are being undertaken by land-grant universities, most of which have taken a significant partnering role with USDA in that education effort. In November 2001, USDA awarded funding of \$4.8 million to 12 land grant universities

for various projects to carry out a comprehensive risk management education program for agricultural producers in the United States.

During the same month, USDA approved two pilot insurance programs for Iowa swine producers to protect them from lower hog prices. The new programs, which will begin in 2002, were authorized under the Agriculture Risk Protection Act of 2000 (ARPA). Until ARPA, federally-backed insurance plans providing livestock protection were prohibited by law. These types of livestock insurance programs, which utilize hog and grain futures prices to determine indemnities, will provide livestock producers with risk management tools for reducing their price risks. Livestock products represent about one-half of total farm cash receipts.

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