



# FACT SHEET

## Using Grain Futures Markets for Small Contracts

Fact Sheet 712

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For many Maryland farmers, futures and options markets have been a valuable tool for forward pricing. By using futures or options, farmers can guarantee a price for their crop prior to harvest or protect stored grain after harvest (see Fact Sheets 488 and 492 for information on how to use futures and options). In addition, Maryland dairy farmers who want to assure feed costs may do so by using futures and options. Unfortunately, some Maryland farmers may be precluded from utilizing grain futures and options at the Chicago Board of Trade (CBT) because of the large contract size.

CBT grain futures and options contracts are for 5,000 bushels, which may be too large for some small- to medium-size grain farmers and most dairy farmers. Even for farmers who produce 10,000 to 20,000 bushels, marketing their crop in 5,000 bushel increments may not allow for enough flexibility in spreading out sales throughout the marketing season.

Fortunately, there is an alternative. The MidAmerican (MidAM) Exchange, which is owned by the Chicago Board of Trade, exists specifically for trading smaller-size futures contracts. Instead of the 5,000 bushel contracts at the CBT, the MidAM Exchange trades grain and soybean contracts for 1,000 bushels. In all other respects, however, the two markets are nearly identical. The only exception is that trading hours for CBT grain



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contracts end at 1:20 p.m. c.s.t., while the MidAM trades until 1:45.<sup>1</sup>

Can Maryland farmers use the MidAM contracts? Several issues need to be addressed before this can be answered. First, the smaller contract size implies that the brokerage or transaction fees for trading MidAM contracts will be larger (per bushel) as compared to CBT contracts. Larger transaction costs lead to a lower effective price. However, it still may be beneficial to use the MidAM contracts because of the flexibility they offer. We explore this in the next section.

The second issue is whether grain and soybean prices at the MidAM Exchange are the same as those at the CBT? If they are, farmers can expect the same effective price from using the MidAM as opposed to the CBT. Notably, if CBT and MidAM Exchange prices are nearly identical then historical basis values, which are based on CBT prices, can be used for those pricing with MidAM contracts. See Fact Sheets 495, 496 and 497 for Maryland historical basis information on corn, soybeans and wheat, respectively. The second section explores how closely the CBT and MidAM prices are correlated over a three-year period.

The third consideration for trading MidAM contracts is whether there is enough trading volume to allow farmers to participate. Without adequate trading volume, it may be

difficult to enter a position or exit an existing position. The issue of trading volume is explored in the final section of this fact sheet.

### Brokerage and Transaction Fees

Trading futures or options contracts requires a commodities broker. Brokers charge a fee based on the *number of contracts* traded which is usually based on a round-turn trade (entry and exit of a position). Because these fees are based on the number of contracts and not the number of bushels, this leads to a higher per bushel cost for smaller quantity contracts like the MidAM.

Brokerage fees vary considerably depending on whether it is a full-service or discount broker. Full-service brokers, who provide marketing advice as well as trading services, usually charge around \$100 per contract. In contrast, discount brokers, who provide only trading services, usually charge \$20 per contract. Table 1 illustrates the per bushel brokerage cost differences for trading CBT contracts versus MidAM contracts when using either a full-service or discount broker.

As Table 1 shows, it costs the same, per bushel to use a full-service broker and trade the 5,000 bushel CBT contracts, than to use a discount broker and trade 1,000 bushel MidAM contracts. Therefore, those interested in trading MidAM contracts should consider discount brokers to handle trades; otherwise,

**Table 1. Brokerage Cost For CBT and MidAM Contracts With Full-Service or Discount Broker**

	<b>CBT Contract: Brokerage Cost (Cents Per Bushel)</b>	<b>MidAM Contract: Brokerage Cost (Cents Per Bushel)</b>
Full-Service Broker, \$100 per contract	2.0	10.0
Discount Broker, \$20 per contract	0.4	2.0

**Table 2. Average Daily Price Difference Between the CBT and MidAM Futures Contracts: 1993-1995**

Commodity	Open Price	High Price	Low Price	Close Price
	Cents Per Bushel			
Corn	0.0	0.4	-0.4	0.0
Soybeans	0.1	0.8	-0.7	0.0
Wheat	0.0	0.6	-0.7	0.0

<sup>1</sup>Smaller contracts also exist for products like soymeal (50 ton contracts as opposed to 100 ton contracts at the CBT) and cattle and hog contracts (20,000 pounds versus 40,000 pounds). These contracts are not explored here but are likely to be good substitutes for the larger contracts and, therefore, of benefit to Maryland farmers.

using a full-service broker and trading MidAM contracts can be quite costly.

### Price Relationships Between CBT and MidAM Contracts

If MidAM prices closely match those at the CBT, then the same benefits can be achieved in terms of setting an effective selling price. Most importantly, closing or settlement prices at the end of each trading day should be roughly similar for the CBT and MidAM so that basis values will be consistent. In terms of trading, the within day prices should be close enough that a trade executed at the MidAM will have a similar price to a trade initiated at the same time on the CBT.

To examine this issue, daily futures prices for corn, soybeans and wheat for the three-year period from 1993 to 1995 are compared between the CBT and MidAM exchanges. Four prices are compared using the following criteria: (1) the open price representing the price at the beginning of trading on a given day; (2) the high price during the trading day; (3) the low price during the trading day; and (4) the closing price at the end of the trading day. Table 2 presents the average price difference between the CBT and MidAM Exchange.

For corn, soybeans and wheat, the opening price and closing price are nearly identical between the CBT and MidAM as is indicative of a very small price spread. The average difference between the high and low prices for the two exchanges is more than zero but still less than 1 cent per bushel. Thus, while it may be true that a trade entered simultaneously at the CBT and MidAM Exchange may not be filled at the same price, they should be relatively close. On average the difference is less than 1 cent per bushel. In addition, the close price being equal across both exchanges implies that one can utilize basis tables based on CBT prices to compute the expected basis when employing MidAM contracts for forward pricing.

### MidAM Contract Volume

While it is encouraging that both the MidAM and CBT have nearly identical prices, the MidAM Exchange tends to have lower trading volume. Because of the CBT's large trading volume, any order that is made near the going price is likely to be filled almost instantly. With lower trading volume, it may become difficult to enter or exit positions, particularly in a quick fashion.

Figure 1 displays the average daily trading volume on the MidAM Exchange for harvest

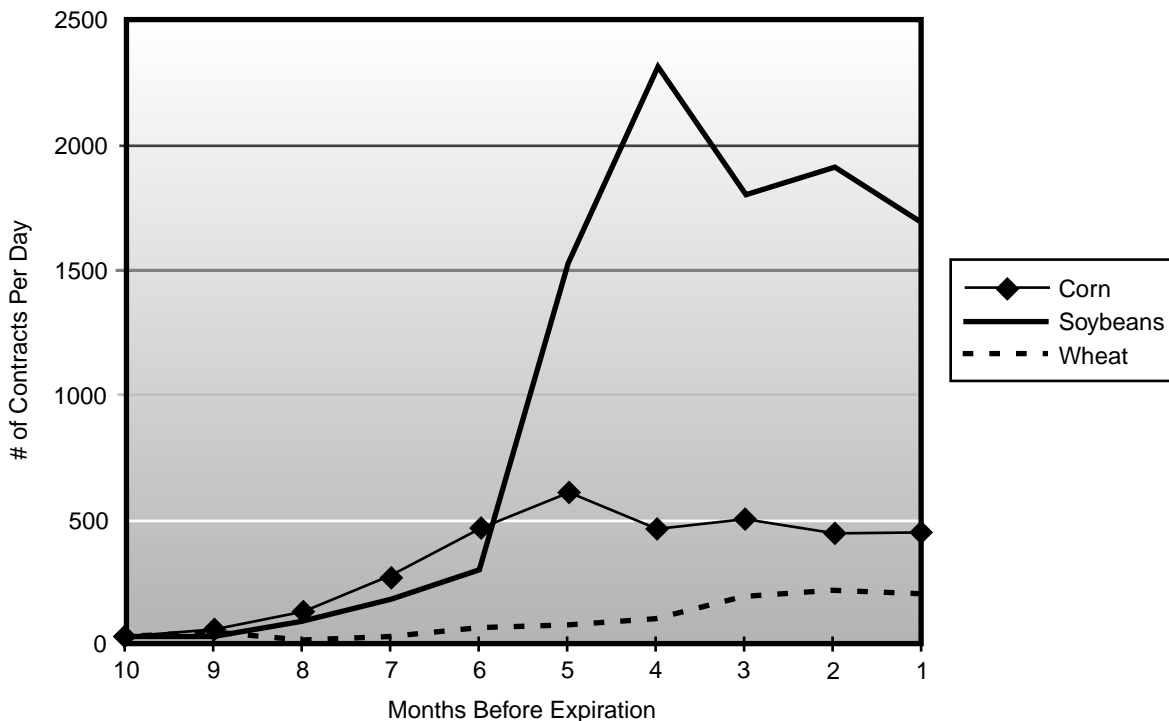


Figure 1. Average Daily Trading Volume for December Corn, November Soybeans and July Wheat Futures Contracts at the MidAmerican Exchange

contract futures in corn, soybeans and wheat. These values are displayed as months from expiration. For corn the harvest contract is December, while for wheat and soybeans the harvest contract is July and November, respectively. Producers would use these contracts to protect their crop prior to harvest.

Although it is difficult to say specifically what trading volume is necessary to assure smooth entry and exit of a position, in all likelihood a minimum level is 100 contracts and a more comfortable level is 250 to 500 contracts per day. Using this scale, corn and soybeans tend to have well above these levels for much of the important pricing period. For corn and soybeans, the average daily volume is under 200 contracts per day prior to May when planting occurs (May is 7 months prior to expiration for corn and 6 months prior for soybeans in Figure 1). After planting, volume picks up considerably for both commodities but especially for soybeans. At its peak, soybean trading volume averages over 2,300 contracts per day. Because of their large volumes, both corn and soybeans appear to be actively traded markets, particularly after planting. As a result, the large trading volume should facilitate smooth and efficient entry and exit of a futures position. Prior to planting, it still may be possible to have an order filled but the lower volume could create some problems.

In wheat, however, the volume is significantly less. Even at its peak the trading volume is only slightly over 200 contracts per day. Thus, it may be difficult to execute trades in a timely fashion for the MidAM wheat contract.

## Concluding Comments

This fact sheet has shown that the MidAM Exchange may be a viable alternative for small- to medium-size grain farmers in Maryland for forward pricing. The small contract size at the MidAM Exchange as compared to the CBT should allow producers to more effectively market their crop in smaller segments.

Because prices at the CBT and MidAM Exchange are nearly identical, producers can be relatively confident in using the MidAM Exchange for hedging purposes. In addition, basis tables computed with respect to the CBT grain prices can be used for the MidAM Exchange without any adjustments. There are two concerns, however, that may cause some producers not to use the MidAM. First, because brokerage fees are a flat rate on the number of contracts and not the size of the contracts, the per bushel cost can be significantly higher using the MidAM Exchange as compared to the CBT. This is particularly true for those who use a full-service broker as opposed to a discount broker. In addition, trading volume for wheat appears to be relatively small and may make trade execution difficult. However, after the planting date this does not appear to be a problem for soybeans and corn.

For those who use options, trading volume may be an important issue. Although no data is presented, it is likely that option trading volume is quite thin, particularly for options that have strike prices far away from the current futures price.

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