price for class III is the current month's Basic Formula Price (BFP). Class II is grade A milk used for soft manufacture dairy products (yogurt, cottage cheese, ice cream, etc.) and is based on the BFP two months previous plus $.30 per hundredweight. Class I is grade A milk used for beverage purposes and is also priced using the BFP two months previous plus a class I differential that varies with distance from Eau Claire, Wisconsin.

Deliveries of milk under both contracts will be subject to federal order pricing rules. The federal order class specification for both contracts is Class III. Class III-a, Class II, and Class I price differentials will apply to the delivery settlement price. In other words, those taking delivery will be responsible for any additional costs associated with higher uses (Classes I and II) or any reduced cost if the milk is used for Class III-A and the federal order Class III-A is less than the Class III price.

What Will the New Milk Futures Contracts Price?

Since the new milk futures contracts price Class III milk and since the minimum Class III price in all federal orders is the Basic Formula Price (BFP), it would seem logical to assume that the contracts will "price" the BFP; that is, that futures prices will represent the expected value of the BFP for the delivery month.

However, the actual value of Grade A milk used for Class III purposes seldom matches the BFP. In Wisconsin and other Midwestern states, intensive competition for milk elevates Grade A milk prices well above minimum blend prices, implying plant costs for Grade A milk used for manufacturing higher than the BFP.

Figure 1 shows the relationship between the Grade A manufacturing milk price in Wisconsin and the M-W price (the predecessor of the BFP) for 1984-94.[6] During that period, Grade A manufacturing milk prices increased steadily above the M-W price. In recent years, Grade A plants paid $.70-$1.00 per hundredweight more than the BFP for milk used to make Class III products.

[6] This chart is derived from data supplied periodically by the Market Administrator's Office, Upper Midwest Milk Marketing Order. The Grade A manufacturing milk price is calculated by subtracting federal order pool draws (revenues associated with market-wide sales of Class I and Class II sales) from reported pay prices of plants engaged exclusively or predominantly in manufacturing Class III products.

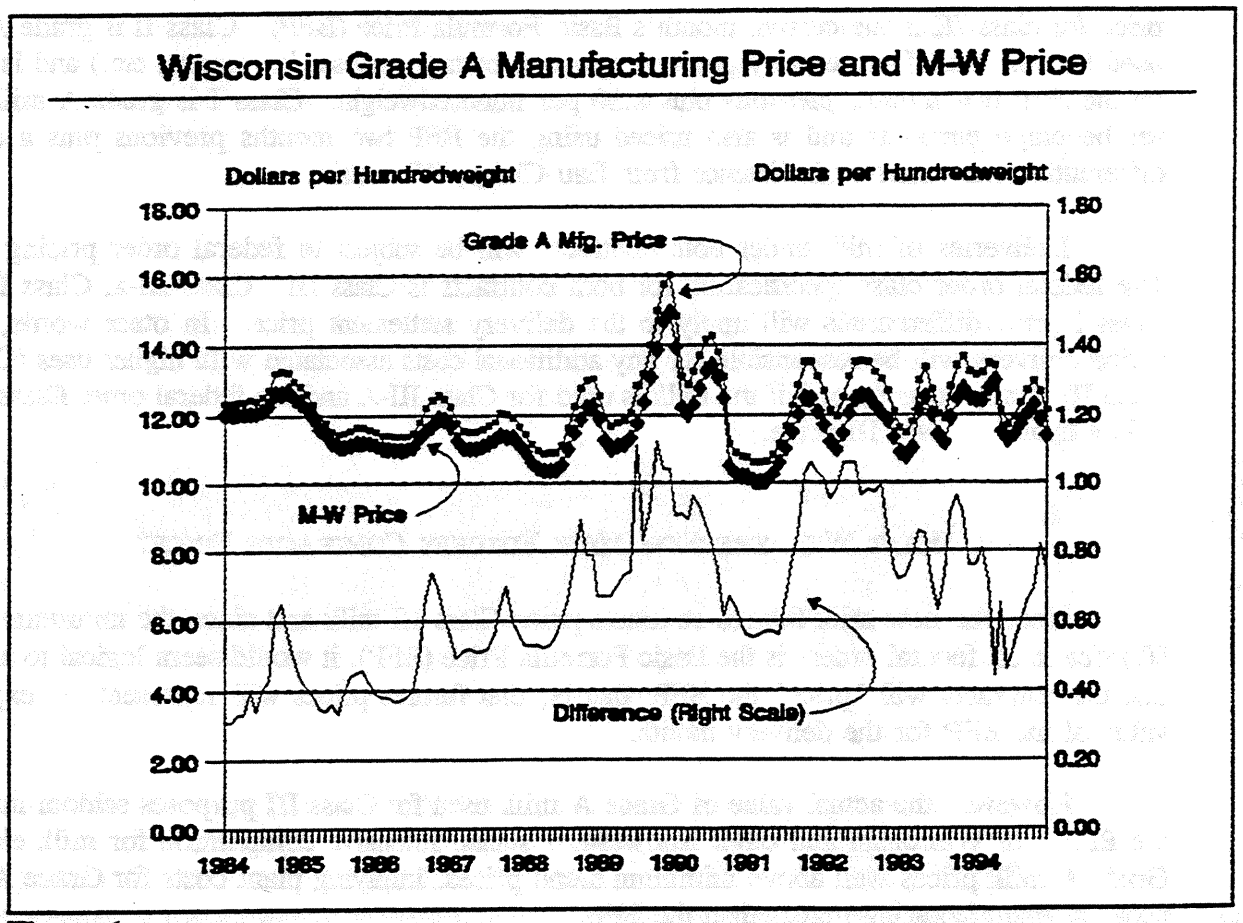

Figure 1

Under the CSCE milk contract, with delivery points in the vicinity of Madison, eligible plants would not likely be willing to supply milk for delivery at the Basic Formula Price if they were obligated to pay producers more. The cost to acquire milk for delivery would be at least the Grade A cost to the plant for Class III milk. Plants may demand even more, since the unanticipated reduction in supply would disrupt manufacturing schedules and cause the plant to operate at reduced input levels.[7] If these added costs are reflected in the futures price, then the CSCE milk futures price would be expected to exceed the BFP by the amount necessary to induce delivery from Grade A plants. Of course, this assumes that delivery, rather than offset, is viewed as a viable option for hedgers.

[7] Grade A manufacturing plants typically negotiate substantial "give-up" charges for spot sales of milk for diversion to fluid use.

If the CSCE contract prices the Madison, Wisconsin, district Grade A price rather than the BFP, establishing a basis for hedging purposes will be more difficult than if the contract prices the BFP. There is no routinely-reported Grade A manufacturing price. Consequently, hedgers will need to predict the Grade A premium for Class III milk in the Madison district and use that value in relation to the BFP in their calculation of basis. This does not pose a serious problem as long as the relationship between the Grade A price and the BFP is reasonably predictable and the contract does not "switch" from pricing the BFP to pricing the Grade A price.

The CME contract price could be affected in a different way. The CME contract specifies plants regulated under the Chicago and Upper Midwest orders as destinations for delivery. Contract sellers bear all or most of the cost of delivery to the destination. The milk may originate from eligible Grade A milk plants anywhere in the U.S.

This raises the possibility that the CME milk contract will price "distressed" milk; i.e., milk volume that temporarily exceeds plant capacity in some region. Distressed milk moving to Wisconsin for manufacturing typically sells at a discount to the BFP.[8] Suppliers are willing to incur large hauling costs in order to find a home for the milk.

Moreover, the location of distressed milk and the related cost of delivery to a Chicago or Upper Midwest order-regulated plant could vary from month-to-month. And, at times, the delivered cost of distressed milk to Midwestern plants could exceed the cost of local supplies. Because of their different delivery terms, the CME contract price would be expected to be at or below the CSCE price. The CME price would equal the CSCE price if the delivered cost of Grade A milk from the lowest price area equalled or exceeded the Grade A price in the delivery region. If the CME contract prices distressed milk that suppliers are willing to ship to the Midwest at delivered price less than the Grade A price in the delivery region, then the CME contract would be expected to trade at a discount to the CSCE contract.

The possibility that the CME contract will price distressed milk poses a potential problem for hedgers because the basis would be unpredictable. For example, at the time a hedge is placed, the CME contract price might reflect a temporary surplus of milk in New Mexico and the related willingness of a cooperative to incur a substantial loss to ship the excess milk to Wisconsin for manufacturing. That price might be lower than the BFP. At the time the hedge is lifted, the CME contract price might represent a normal supply situation, pricing the Grade A manufacturing milk price in Minnesota and Wisconsin. That price would be above the BFP. In other words, the price expectation when the hedge was placed would be different from the price expectation when the hedge was lifted because the underlying futures price was, in effect, pricing different commodities.

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[8] Distressed Grade A milk from regulated plants is subject to federal order minimum pricing rules. But dairy cooperatives, which are exempt from paying minimum producer blend prices, account for most interorder shipments of milk in excess of local manufacturing capacity.

These concerns may be immaterial if delivery occurs only very infrequently. In that case, both contracts would likely price the BFP. That is because the BFP is the only consistently reported, verifiable, nationally applicable milk price. That, in itself, may ensure that the contracts price the BFP, and that parties choosing to make or take delivery bear any additional costs or risks. Since delivery is (intentionally) very difficult under both contracts, we suspect that it will be a rare event.

In the hedging examples below, we assume that the CSCE and CME milk contracts price the BFP. If that is not the case, then hedgers will need to account for deviations in establishing basis.

HEDGING WITH THE MILK FUTURES CONTRACTS - SOME EXAMPLES

A stated reason for introducing the new milk futures contracts is to provide more straightforward hedging opportunities for dairy farmers and dairy plants buying raw milk. The cheddar cheese futures contract, which has traded on the Coffee, Sugar and Cocoa Exchange since June 1993 can and has been used for hedging milk. This involves a cross-hedge; protecting a price for one commodity by trading futures contracts for another commodity. Since cheese and milk prices move together very closely, hedging milk using the cheese futures is not a particularly risky cross-hedge. Nonetheless, the exchanges felt that a direct hedge (trading raw milk futures contracts to protect raw milk prices) would be easier for many hedgers to understand and use.

Assuming that the new milk futures contracts "price" the Basic Formula Price, hedging is straightforward for some potential users. But it is not for others. Fluid milk processors should find it easy to derive accurate price expectations based on milk futures prices (i.e, basis risk will likely be small). Dairy plants who buy milk on a volume basis and dairy farmers who sell milk by the hundredweight will also find the new contracts reasonably simple to use for hedging. However, plants paying for milk components rather than milk volume can only use the futures contracts to cross hedge component prices against the futures milk price. Likewise, dairy farmers paid under multiple component pricing arrangements will need to convert milk futures prices to related component prices or convert component prices to equivalent expected milk prices if they engage in hedging.

Several hedging examples are shown below. We caution the reader that these are simplified examples to illustrate the concept of hedging with the milk futures contracts and the types of hedges that might be placed.

FLUID MILK PROCESSOR HEDGING

Possibly the most direct hedging opportunity with the milk contracts is for fluid milk bottling plants that purchase their entire raw milk supply from cooperatives. This is because all multiple component pricing (MCP) plans in effect under federal milk marketing orders exempt fluid handlers (bottlers) from MCP payments. In all orders, fluid handlers' pool obligation is the order Class I price plus or minus an adjustment for butterfat content above or below 3.5 percent. The minimum Class I price is the basic formula price from two months earlier plus a fixed Class I differential. Hence, a handler can lock in an order price two months beyond the contract month for the milk futures contract.

Fluid handlers acquiring milk from cooperatives typically pay more than the order minimum Class I price in the form of an "over-order" or "superpool" premium added to the announced Class I price. These premiums are a source of basis risk, but they are usually announced two months in advance, and usually do not change substantially from month-to-month.

An example of a potential hedge by a fluid milk bottler is illustrated in the table below. The example assumes that the bottler forward contracts for delivery of half-pints of milk to a school district on a fixed price basis. The bottler's largest cost is raw milk, so it wants to protect its contracted price by locking in its raw milk cost.

Fluid Milk Processor Hedge to protect contracted sale

Date	Cash Market	Futures Market	Basis
Jan. '96	Bottler needs 500,000 pounds of milk to supply April school milk contract. Class I Differential = $2.50. Coop premium = $1.00. Price objective is $15.00.	BUY 10 Feb. contracts @ $11.50	$3.50
Case I: Futures price increase/No basis change			
Feb. '96		SELL 10 Feb. contracts @ $12.50.	
Apr. '96	Bottler purchases 500,000 pounds of milk from coop @ $16.00.		$3.50
Gain/(Loss)	($1.00)	$1.00	
Net Gain	$0.00		

Case II: Futures price increase/Basis strengthens			
Feb. '96		SELL 10 Feb. contracts @ $13.00	
Apr. '96	Bottler purchases 500,000 pounds of milk from coop @ $17.00. (Coop premium increased to $1.50)		$4.00
Gain/(Loss)	($2.00)	$1.50	
Net Gain	($0.50)		
Case III: Futures price decrease/Basis weakens			
Feb. '96		SELL 10 Feb. contracts @ $11.00	
Apr. '96	Bottler purchases 500,000 pounds of milk from coop @ $14.25. (Coop premium decreased to $.75)		$3.25
Gain/(Loss)	$.75	($.50)	
Net Gain	$.25		

In this example, the bottler would have established its contract price to the school district by converting the February 1996 futures price into a related raw product price that would have permitted a normal profit. With no change in the basis (the difference between the bottler's expected procurement price and the futures contract price), any potential loss from a price increase in the cash market would be offset by a gain from futures market transactions.

Because of the lag in Class I pricing under federal orders, the bottler would place its hedge in the futures contract delivery month two months before the milk was to be purchased. It would then offset its long futures market position two months before procuring milk in the cash market. Since cooperatives price milk to their buyers according to federal order pricing rules, the lagged BFP, not the current month BFP, establishes the processors fluid milk price.

There are only two sources of basis risk in this example: (1) The coop overorder premium may be different from what the plant expected when it placed its hedge; or (2) the futures market price may not converge with the basic formula price in the delivery month.

In case II of the example, the coop supplying the bottler negotiated a premium higher than what the bottler expected. This resulted in a basis higher than expected (strengthened basis), leading to a net loss from the hedge. In Case III, the coop premium was less than

expected (basis weakened), and the hedge showed a net gain. Note that the Class I differential is fixed and cannot affect the basis.

Convergence of cash and underlying futures prices during the month of delivery is usually assured because of arbitrage – gains from "buying low" and "selling high" cause the cash and futures prices to come together at the time of delivery. In actively-traded futures markets, there is essentially no risk that prices will not converge. However, as noted earlier, there is some question about what cash market price the futures price will converge with in the case of the milk futures.

Fluid Milk Supplier Hedging

Another fluid milk hedging opportunity involves a cooperative supplying milk to a fluid bottler. The hedge would be different depending on whether the supply contract was an open price or fixed price contract. With an open price contract, the cooperative would be interested in locking in a price that represented a profitable fluid milk price for its members. It would place a short hedge (short futures market position with subsequent offsetting purchase) to protect against a price decline. Under a fixed price contract, the cooperative would need to protect its procurement cost, and would place a long hedge (long futures market position with subsequent offsetting sale).

Let's look at a simple open price supply contract hedge first. Assume that in January 1996, a cooperative agrees to supply one million pounds of milk to a fluid bottler in June. The price when the milk is delivered will be the BFP for April plus $3.75 per hundredweight. This pricing formula conforms with federal order pricing rules: The minimum Class I price is the Basic Formula Price from two months earlier plus a Class I differential that is constant from month-to-month. Assume that the Class I differential applying in this market is $2.50 per hundredweight. Further, assume that the cooperative is a member of a over-order bargaining federation that has negotiated a $1.25 per hundredweight Class I premium with all fluid handlers in the marketing area. Under these assumptions, the basis for the hedging transaction is $3.75, the sum of the order Class I differential and the overorder premium.

The cooperative feels that the $12.00 futures price for April 1996 represents an optimistic price level, and decides to lock in the related fluid milk price of $15.75. To do so, it sells milk contracts equal in volume to its contracted cash market sale, or 20 50,000-pound contracts. Because of the formula lag in pricing, the cooperative will place its hedge in the futures contract delivery month that is two months prior to the month it will make its milk delivery; it is hedging in the month when the sale is priced, not when it occurs.

In this example, futures market gains from offsetting the hedge cancel cash market losses (relative to the price expectation) if the futures price falls between the time the hedge is placed and when it is lifted. Likewise, cash market gains (relative to expectations) cancel futures

market losses if the futures price increases. With no change in basis, gains and losses exactly match, meaning that the cooperative exactly achieves its locked-in price.

This is an unusually risk-free hedge. As long as the milk futures contracts price the BFP and there is convergence in the futures market delivery month, there is no basis risk in this hedging example. That is because the cooperative has locked its sales price to the BFP.

Cooperative contracts to supply milk to a fluid bottler at future date

Date	Cash Market	Futures Market	Basis
Jan. '96	Cooperative signs an *open price* contract to supply a fluid bottler with 1 million pounds of milk during June 1996. Price at delivery will be BFP from two months earlier plus $3.75 (Class I differential of $2.50 and Overorder premium of $1.25). Coop wants to lock in an attractive fluid milk sales price as reflected by current futures quote for April. Price objective is $15.75.	SELL 20 Apr. contracts @ $12.00.	$3.75
Case I: Futures price decline/No basis change			
Apr. '96		BUY 20 Apr. contracts @ $11.75.	
Jun. '96	Cooperative delivers milk to bottler. Gross pay price is $15.50		$3.75
Gain/(Loss)	($0.25)	$0.25	
Net Gain	$0.00		
Case II: Futures price increase/No basis change			
Apr. '96		BUY 20 Apr. contracts @ $13.00	
Jun. '96	Cooperative delivers milk to bottler. Gross pay price is $16.75.		$3.75
Gain/(Loss)	$1.00	($1.00)	
Net Gain	$0.00		

There is one other complexity that should be discussed. Note that nothing is said in this example about what the cooperative pays its members in the month of June. The June BFP could be much lower or higher than the April BFP. How can this be a risk-free hedge if the cooperative price is unknown when the hedge is lifted.

The answer is in federal order pricing and pooling rules. The cooperative accounts to the federal order pool for its Class I disposition at the federal order Class I price, which for June Class I sales, is set in April. Consequently, even if the BFP is different between April and June, the Class I price obligation is fixed in April. The cost of the milk in terms of the cooperative pay price may be different from expectations because producer premiums may be higher or lower than predicted. But this risk applies whether or not the cooperative hedges; hence, it is not a part of basis risk in this example. (But see the next example!)

A second example illustrates a fixed price contractual arrangement. In January 1996, a cooperative agrees to supply milk to a bottler in June 1996 at $16.00 per hundredweight. To protect itself against adverse price movements that would cause a loss, the cooperative wants to lock in the cost of the milk it will supply at the fixed price. This calls for a long hedge.

In this example, the basis is calculated as the cost of milk to the cooperative less the futures price (assumed to price the BFP). In practice, the cooperative would set its sales price by adding its expected basis to the futures market prediction of the BFP for the pricing month. The cost of milk is largely fixed by federal order pricing and pooling rules. However, there is an element of basis risk associated with "plant premiums" (premiums over the federal order blend price). In building its basis, the cooperative assumed it would pay a Grade A plant premium of $1.00 per hundredweight. In Case II, the actual premium paid was only $.75, leading to a hedging "profit" equal to the amount by which the basis weakened ($.25). Had the basis strengthened, the hedge would have yielded a loss equal to the change.

Cooperative contracts to supply milk to a fluid bottler at a specified price in the future.

Date	Cash Market	Futures Market	Basis
Jan. '96	Cooperative commits to provide 1 million pounds of milk to a fluid bottler during June 1996 at a fixed price of $16.00. Class I Differential = $1.50. Grade A premium to patrons is $1.00 over the order blend price. Projected cost of milk is $14.50. (BFP plus $2.50)	BUY 20 Apr. contracts @ $12.00.	$2.50

Case I: Futures price decline/No basis change			
Apr. '96		SELL 20 Apr. contracts @ $11.75.	
Jun. '96	Cooperative procures milk to meet contract. Accounts to federal order pool at $13.25 Class I price ($11.75 BFP plus $1.50 Class I differential). Pays producers a June '96 plant premium of $1.00 (over the order blend price). Cost of milk is $14.25.		$2.50
Gain/(Loss)	$0.25	($0.25)	
Net Gain	$0.00		
Case II: Futures price increase/Basis Weakens			
Apr. '96		SELL 20 Apr. contracts @ $13.00	
Jun. '96	Cooperative procures milk to meet contract. Accounts to federal order pool at $14.50 Class I price ($13.00 BFP plus $1.50 Class I differential). Pays producers a June '96 plant premium of $.75 (over the order blend price). Cost of milk is $15.25.		$2.25
Gain/(Loss)	($.75)	$1.00	
Net Gain	$.25		

CASH FORWARD PRICING

Milk futures can be used by dairy plants to offer fixed price contracts to their dairy farmer suppliers. The cheddar cheese contract on the CSCE has been used for this purpose by cooperatives heavily involved in manufacturing cheese. The new milk futures may provide superior hedging opportunities for plants making other dairy products whose prices are tied as closely as cheese to the BFP. Some cheese plants might also choose to use milk futures rather than the cheese futures for hedging cash forward contracts.

A simple example of cash forward contracting by a cheese plant using milk futures is illustrated below. The example is simple because it implies a very rudimentary basis calculation. Cash market gains and losses are calculated relative to "opportunity cost," i.e., in relation to what competitors paid for milk.

Cheese plant offers cash forward price contract to dairy farmers; hedges obligation in milk futures

Date	Cash Market	Futures Market	Basis
Jan. '96	Plant offers fixed price contract to Grade A patrons. Will pay $14.00 base price (3.5% butterfat) for April milk. Contract price is derived as follows: $13.00 BFP + .75 Normal Apr. "pool draw" + .25 Plant premium $14.00	SELL Apr. milk contracts @ $13.00.	$1.00
Case I: Futures price decline/No basis change			
Apr. '96	Plant pays producers the contract price of $14.00. Competitors pay $13.00.	BUY Apr. milk contracts @ $12.00.	$1.00
Gain/(Loss) Net Gain	($1.00) $0.00	$1.00	
Case II: Futures price increase/No basis change			
Apr. '96	Plant pays producers the contract price of $14.00. Competitors pay $15.00.	BUY Apr. milk contracts @ $14.00	$1.50
Gain/(Loss) Net Gain	$1.00 $0.00	($1.00)	

The plant offering the forward pricing arrangement establishes its future pay price according to the futures market price for milk. In this case, the April price offer is set in January by adding the manufacturing plant's expected "pool draw" and its plant premium to the futures market prediction of the BFP. The pool draw is the difference between the reported federal order blend price for the month and the Class III, or Basic Formula Price. Pooled

manufacturing plants receive this draw to make up the difference between the blend price (which all regulated handlers are obligated to pay their producers) and the Class III price (the order-specified value of milk used to make cheese). As described earlier, the plant premium is over the blend price, and reflects competition among plants for milk.

The pool draw and the plant premium comprise the basis, which is added to the futures price to derive the Grade A price offer. The plant is committed to paying $14.00 per hundredweight. To protect itself against adverse price movements, which would prevent the plant from paying the fixed price, the plant hedges by selling April milk futures contracts equivalent in volume to the volume of milk contracted at the fixed price.

If there is no change in the basis from what was predicted when the hedge was placed, then futures market gains will offset cash market losses if futures market prices fall. Cash market losses, in this case, are relative to what competitors paid for milk. In case I of the example, the plant offering the forward contract would be at a serious competitive disadvantage if it were obligated to pay $14.00 while its competitors making the same product could acquire milk at $13.00.

In case II, the plant loses $1.00 per hundredweight from its futures market transaction because the futures price (and the BFP) rose by $1.00 between the time the hedge was placed and when it was removed. However, this loss is offset by the lower price the plant pays for contracted milk relative to competitors. Obviously, those dairy farmers holding fixed price contracts would not be very pleased by this turn of events. But they received the price they agreed to contract for in January.

It is instructive to compare this cash forward pricing arrangement with one involving a hedge in cheese futures. The following example shows an identical Grade A cash forward price quote derived from the CSCE cheddar cheese futures. Basis is derived in a different fashion. First, the cheese futures price is converted to gross revenue per hundredweight by multiplying by expected yield of cheese per hundredweight of milk (assumed to be 10 pounds in the example). Then, the gross value is adjusted by added revenue associated with the plant pool draw and plant costs, yielding a net value to milk. The net value, representing what the plant can profitably afford to pay for milk, is the cash forward price offer. The basis is the difference between the net value of milk and the futures price for cheese times expected cheese yield.

Both the pool draw and plant costs are sources of basis risk in this hedging example. In Case II, the pool draw is $.25 less than expected and net make cost is $.10 more than expected. This weakens the basis by $.35, resulting in a hedging loss. Other sources of basis risk include cheese yield variations and local cheese prices varying from the futures price at the time of offset.

Cheese plant offers cash forward price contract to dairy farmers; hedges obligation in cheese futures

Date	Cash Market	Futures Market	Basis
Jan. '96	Plant offers fixed price contract to Grade A patrons. Will pay $14.00 base price (3.5% butterfat) for May milk. Contract price is derived as follows: $14.00 Cheddar cheese price X 10 + .75 Normal Apr. "pool draw" - .75 Net make cost $14.00	SELL May cheese contracts @ $1.40	$0.00
Case I: Futures price decline/No basis change			
May '96	Plant pays producers the contract price of $14.00. Cheese revenue is $1.00/Cwt. less than expected. Pool draw and net make cost are both $.75. Net milk value is $13.00.	BUY May cheese contracts @ $1.30	$0.00
Gain/(Loss)	($1.00)	$1.00	
Net Gain	$0.00		
Case II: Futures price increase/Basis weakens			
May '96	Plant pays producers the contract price of $14.00. Cheese revenue is $.50/Cwt. more than expected. Pool draw is $.50 and net make cost is $.85. Net milk value is $14.15.	BUY May cheese contracts @ $1.45	($.35)
Gain/(Loss)	$.15	($.50)	
Net Gain	($.35)		

Dairy Farmer Hedge

Dairy farmers can hedge milk sales using the cheddar cheese or the nonfat dry milk contracts. But hedges based on these contracts are cross-hedges, requiring the conversion of cheese or nonfat dry milk prices to equivalent milk prices. Hedging Grade A milk at the farm against the milk futures contract is a direct hedge, which makes it simpler to calculate basis if

payment is made on a volume basis. Moreover, the milk contracts are for 50,000 pounds of milk, which is smaller than the equivalent volume of milk associated with the product contracts. Consequently, smaller farmers should be better-able to utilize the milk contracts for hedging.

A simplified dairy farmer hedge is illustrated below, in which a dairy farmer sells 2 April milk contracts to hedge expected April Grade A milk production of 100,000 pounds. Given specific on-farm conditions with respect to milk composition, size of herd, milk quality, etc.; buyer conditions with respect to the buyer's premium structure (plant volume, quality, protein, etc.); and milk utilization by class in the federal order market; the farmer has determined that a $13.00 BFP correlates to a Grade A milk price of $14.00. That price looks favorable compared to production costs, so the farmer attempts to lock the price in through a short hedge. In Case I, with a constant basis, the lower cash market price from a lower BFP is offset by futures market gains. In cases II and III, offsets are not exact because the basis at the time the hedge was lifted was different from what was expected at the time the hedge was placed. Net gains are experienced with a strengthened basis and losses are incurred when the basis weakens.

The farm-level Grade A price associated with a particular BFP was merely specified in this example. In reality, considerable analysis would be necessary to derive the basis and there would be several sources of basis risk. The minimum federal order blend price varies with utilization by class as well as with the BFP; hence the blend price relative to the BFP is not constant. A plant's base pay price relative to the federal order blend price varies with product mix, extent of competition, and premium structure. Farmers' butterfat and protein tests, somatic cell count and other quality variables, herd size, and a host of other factors cause actual pay prices to deviate from base pay prices.

Dairy Farmer Hedge

Date	Cash Market	Futures Market	Basis
Jan. '96	Dairy farmers expects to sell 100,000 pounds of Grade A milk in April. Price expectation based on April futures price is $14.00	SELL 2 Apr. milk contracts @ $13.00	$1.00
Case I: Futures price decline/No basis change			
Apr. '96	Sell 100,000 pounds of milk @ $13.00.	BUY 2 Apr. milk contracts @ $12.00.	$1.00
Gain/(Loss)	($1.00)	$1.00	
Net Gain	$0.00		

Case II: Futures price decline/Basis weakens			
Apr. '96	Sell 100,000 pounds of milk @ $13.00.	BUY 2 Apr. milk contracts @ $12.50	$.50
Gain/(Loss)	($1.00)	$.50	
Net Gain	($0.50)		
Case III: Futures price increase/Basis strengthens			
Apr. '96	Sell 100,000 pounds of milk @ $15.00.	BUY 2 Apr. milk contracts @ $13.50	$1.50
Gain/(Loss)	$1.00	($.50)	
Net Gain	$.50		

But regardless of the complexities associated with calculating basis, ***basis risk*** for hedgers is usually much smaller than ***price risk*** for those who choose not to hedge. The relationship between Grade A prices and the BFP is very strong. Note from Figure 2 the large swings in the Wisconsin average Grade A price and the M-W price (predecessor to the BFP) over the last 10 years.[9] Two-dollar price changes within a year have become the norm. Note in contrast the small within-year differences between the Grade A price and the M-W price. The difference in prices is quite predictable relative to the absolute prices. Moreover, the price differences exhibit a pronounced seasonal pattern, suggesting even more predictability.

This seasonality is detailed in Figure 3, which shows the 10-year average difference between the Wisconsin Grade A price and the M-W price by month. The monthly difference peaks in the late fall and troughs in mid-summer. The upper and lower ranges shown in the chart represent the 90 percent confidence intervals for the price differences. For example, if the same relationship between the two price series continues, one can be 90 percent confident that the Wisconsin Grade A price will exceed the M-W (BFP) by between $.50 and $1.25 in June.

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[9] The Wisconsin Grade A price shown in Figure 2 is at average butterfat test, while the M-W price is adjusted to a 3.5 percent butterfat basis. The seasonal pattern of price differences is related primarily to milk composition, especially butterfat. Butterfat tests tend to be lowest in the summer and highest in the late fall. Note that this price series represents the value of all Grade A milk (regardless of use) and is different from the Grade A manufacturing milk price series discussed earlier.

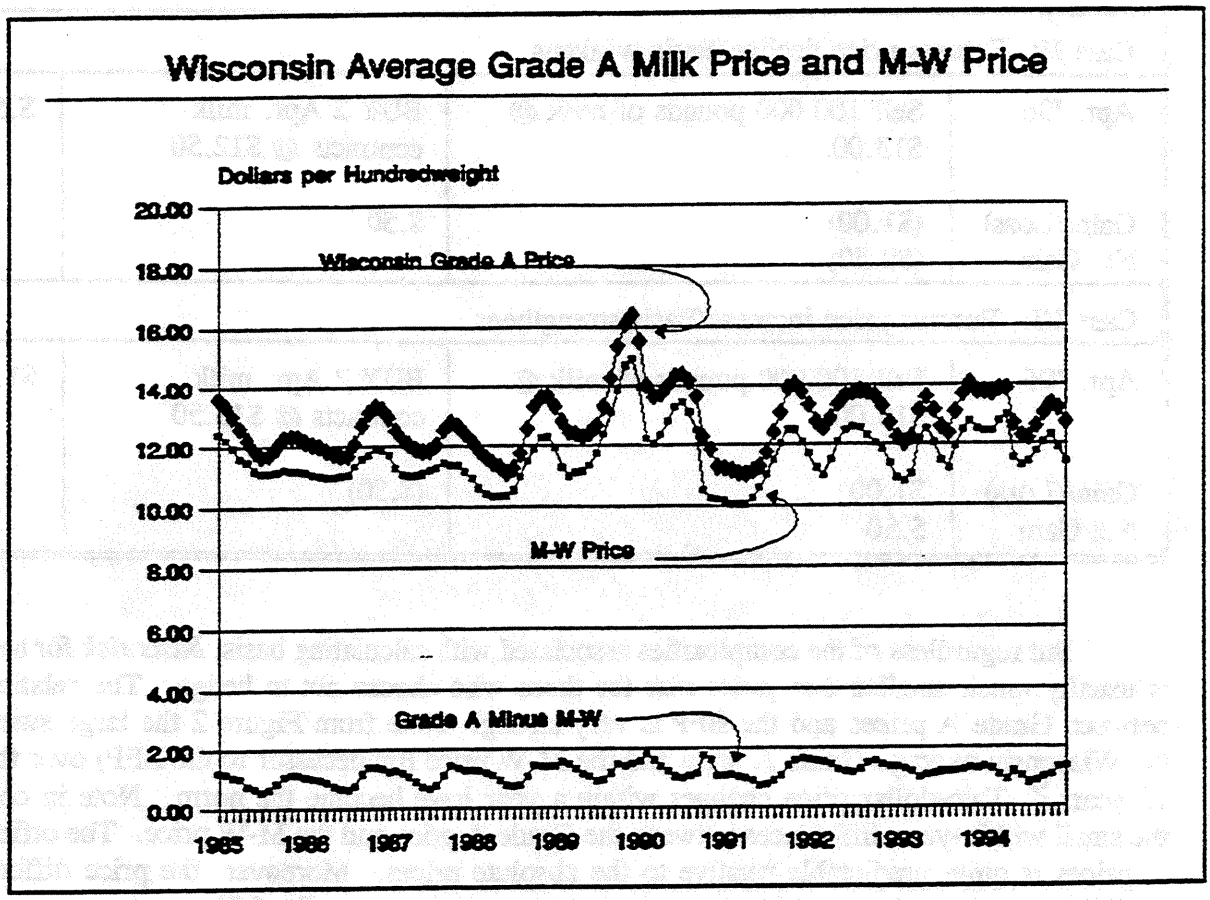

Figure 2

MULTIPLE COMPONENT PRICING AND HEDGING

Beginning with milk checks written for January marketings, most Grade A milk producers in the Upper Midwest will have their milk priced according to its component values. Five federal orders in the Upper Midwest have been amended to require Multiple Component Pricing (MCP). Under MCP, producers will be paid for pounds of protein, butterfat, and other solids in milk. This is in contrast to current federal order pricing in the region, under which producers are paid for milk volume plus or minus a butterfat differential.[10]

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[10] See Marketing and Policy Briefing Papers No. 49 (*USDA's Recommended Decision on Multiple Component Pricing for Midwestern Federal Milk Marketing Orders*) and No. 53 (*USDA's Final Decision on Multiple Component Pricing for Midwest Federal Milk Marketing Orders*) for a detailed explanation of the MCP plan and how it will affect payment for milk.

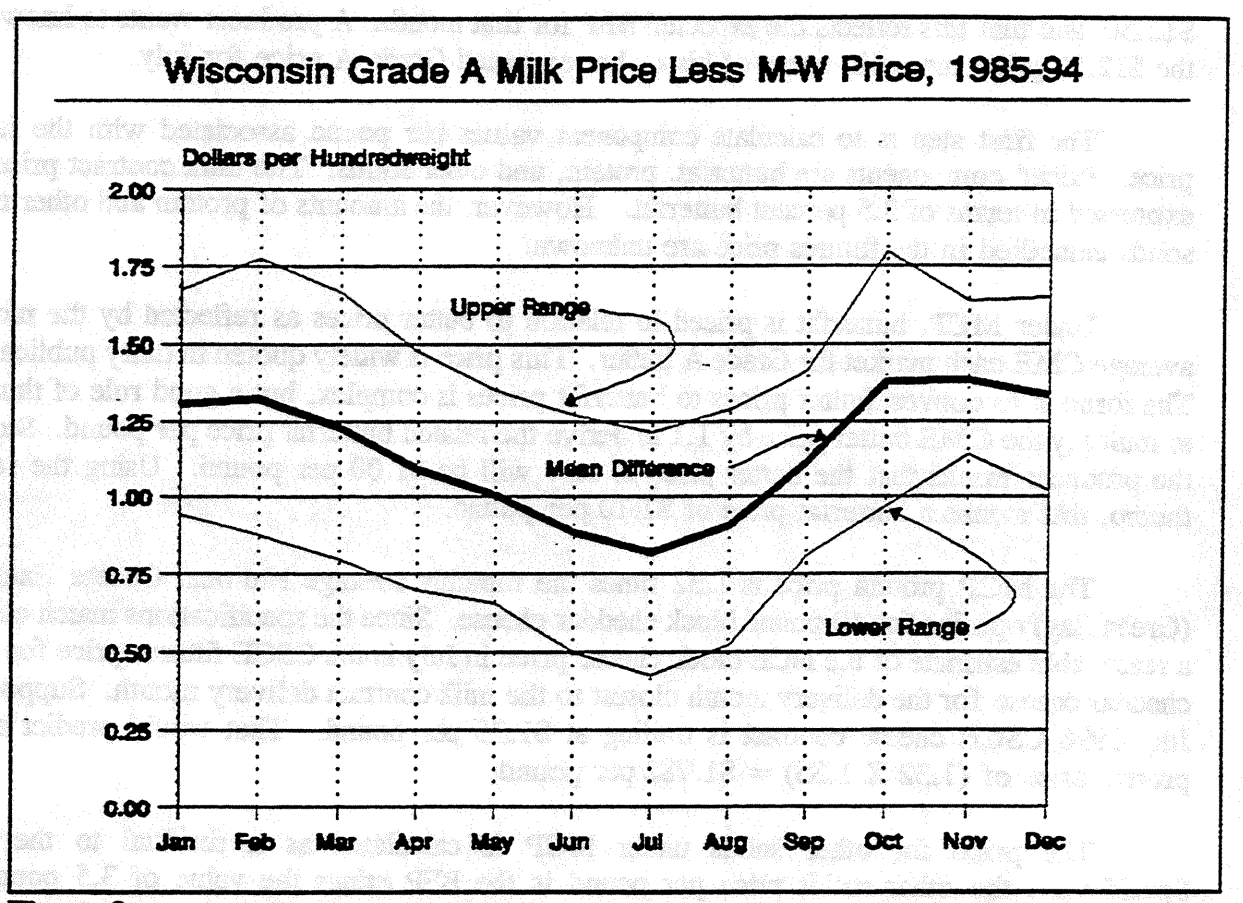


Figure 3

The switch to MCP in Upper Midwest federal orders affects hedging. Producers are no longer paid for milk; they are paid for milk components. Consequently, producers cannot directly hedge expected milk component marketings against the CSCE and CME milk contracts, which are written in terms of milk volume. Likewise, handlers who use milk for Class III and Class II purposes must pay for milk components, not for milk volume.

This does not mean that producers and handlers cannot use the new milk contracts for hedging. It does mean that hedges will be cross hedges – hedging milk component prices against a per hundredweight milk value – instead of direct hedges. In placing hedges, producers and handlers will need to convert futures milk prices to milk component prices or convert component prices to an equivalent milk price.

An example will illustrate how a producer might perform these conversions in establishing a basis prediction. At the same time, the example will reiterate how MCP values will be determined. Suppose that in January 1996, the CME July 1996 contract is trading at

$12.50, and that this reflects the expected BFP for that month. A producer wants to know what the $12.50 price means in terms of his or her expected Grade A price for July.

The first step is to calculate component values per pound associated with the futures price. Priced components are butterfat, protein, and other solids. The milk contract prices are expressed in terms of 3.5 percent butterfat. However, the amounts of protein and other nonfat solids embodied in the futures price are unknown.

Under MCP, butterfat is priced in relation to butter prices as reflected by the monthly average CME cash market for Grade A butter. This price is widely quoted in dairy publications. The formula to convert butter prices to butterfat prices is complex, but a good rule of thumb is to multiply the CME butter price by 1.1 to derive the related butterfat price per pound. Suppose the producer thinks that the butter price in July will be $1.00 per pound. Using the rule of thumb, that means a butterfat price of $1.10 per pound.

The MCP protein price is 1.32 times the monthly average National Cheese Exchange (Green Bay) opinion for 40-pound block cheddar cheese. Since the specifications match closely, a reasonable estimate of the NCE block cheese price in July is the CSCE futures price for block cheddar cheese for the delivery month closest to the milk contract delivery month. Suppose the July 1996 CSCE cheese contract is trading at $1.35 per pound. That would predict a July protein price of (1.32 X 1.35) = $1.782 per pound.

The price for other solids under MCP is calculated as a residual to the BFP. Specifically, the other solids price per pound is the BFP *minus* the value of 3.5 pounds of butterfat *minus* the average protein test associated with the BFP times the protein price per pound all *divided by* the average other solids test associated with the BFP. The BFP protein and other solids tests vary seasonally, but are relatively constant from year-to-year. Suppose the average BFP protein and other solids test for July average 3.2 and 5.5 percent respectively. Then, the estimated other solids price per pound would be:

$$[\$12.50 - (3.5 \text{ X } \$1.10) - (3.2 \text{ X } \$1.782)]/5.5 = \$.536$$

With these expected component values associated with the July futures price for milk, the producer can then estimate his or her farm level Grade A milk price consistent with the futures quote. The producer's component levels will likely be different from those used to calculate the MCP component prices. Suppose the producer expects July herd milk to test 3.8 percent butterfat, 3.4 percent protein, and 5.6 percent other solids. Given the milk component values calculated above, milk value consistent with the $12.50 futures price would be:

	3.8 X $1.100 =	$4.18	= butterfat value per hundredweight
+	3.4 X $1.782 =	6.06	= protein value per hundredweight
+	5.6 X $0.536 =	3.00	= other solids value per hundredweight
		$13.24	= total milk component value per hundredweight

The producer's milk is expected to be worth 74 cents per hundredweight more than the July 1996 futures market BFP prediction because of higher component values. Since the milk is Grade A and purchased by a plant regulated under a federal order, the producer will receive an additional *producer price differential* reflecting market-wide utilization and prices of classes of milk other than Class III. Let's say that, based on historical records, the producer price differential is expected to be $.35 per hundredweight in our example.

The producer will also receive a premium or a penalty to the extent herd somatic cell count (SCC) for the month differs from 350,000. The premium/penalty per 100,000 SCC below/above 350,000 will be between 6 and 7 cents, depending on the cheese price for the month. Let's assume the producer expects to have a herd SCC of 150,000 in July, and that this would qualify for a premium of 13 cents per hundredweight.

Finally, the producer would probably be eligible to receive other premiums on top of the federal order minimum price. These might include plant premiums, volume premiums, and, possibly, quality premiums over and above the federal order SCC premium. Assume the producer expects these other premiums to total $.25 per hundredweight in July based on previous experience.

The producer's expected total milk value per hundredweight with these assumptions would be:

	$13.24	=	Milk component value
+	.35	=	Producer price differential
+	.13	=	Somatic Cell Count Premium
+	.25	=	Non-order producer price enhancements
	$13.97	=	Expected Grade A price

Stated differently, the producer's basis prediction is $1.47 per hundredweight after converting MCP component values to milk equivalent and accounting for other distinctions between the futures market price quotation and the manner in which farm-level Grade A prices are established. There are many elements making up the basis and, consequently, many sources of basis risk. But experience with relating actual pay prices with the BFP should serve to minimize basis risk.

SUMMARY

The two new milk futures contracts offer dairy farmers and other buyers and sellers of milk and dairy products additional opportunities to manage price risk in an increasingly volatile milk price environment. The availability of these risk management tools is especially important given the market-oriented direction of federal dairy policy.

The CSCE and CME contracts differ somewhat in their specifications. Potential hedgers will need to evaluate which offers the best opportunity to lock in prices. Hedgers should also look at the cheese and nonfat dry milk contracts in determining the most appropriate risk management strategy. Strategies may involve using more than one futures market.

Key in any hedging decision is the basis, especially the predictability of the relationship between cash and futures prices. Hedgers should compare the alternative contracts in terms of which yields the most predictable basis given the type of hedge and the specific market conditions affecting their business.

MAY 15, 1996

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

New Markets: Time and Effort are Keys to Success

New markets take time to fully develop. How *much* time is difficult to determine. They need the right mix of comfort level with the need to manage price risk exposure in order to grow.

The CSCE's new milk futures and options markets have experienced relatively light trading activity since their introduction in mid-December. And while this level of activity barely scratches the surface of the milk markets' potential, it is *not* unusual for new products. To try and understand the developmental process of a new market, we look at the CSCE's sugar options market, an example of a highly successful marketplace that got off to a very slow start.

Sugar Options

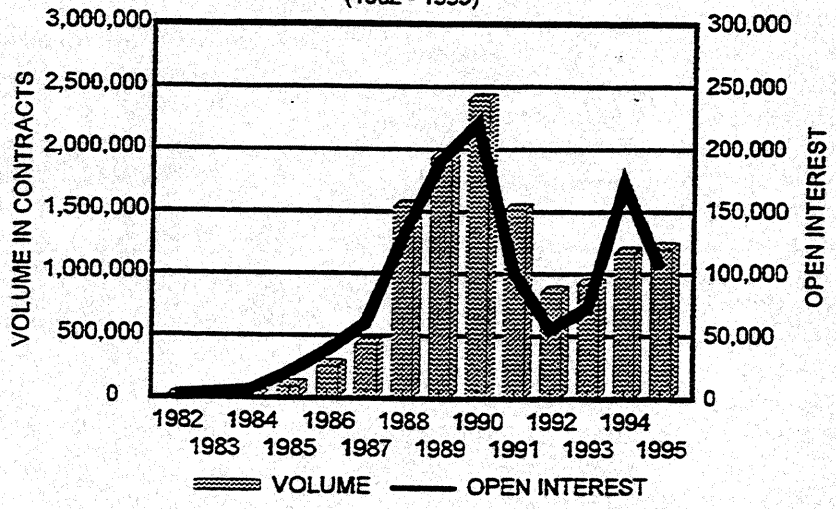
The CSCE introduced the first exchange-traded option on a futures contract in 1982, with the introduction of options on sugar futures. The concept of a sugar option was new and different, and was initially met with caution, due to a lack of understanding and comfort with the idea.

To educate market participants and teach them how to use this beneficial risk management tool, the Exchange embarked on an ambitious marketing and education effort. Thousands of prospective customers attended pre-launch seminars from coast to coast, Exchange staff spent hours and days with individual firms, teaching trading personnel. The interest in the market was tremendous. But, in spite of that, only 704 sugar options contracts traded in the first month.

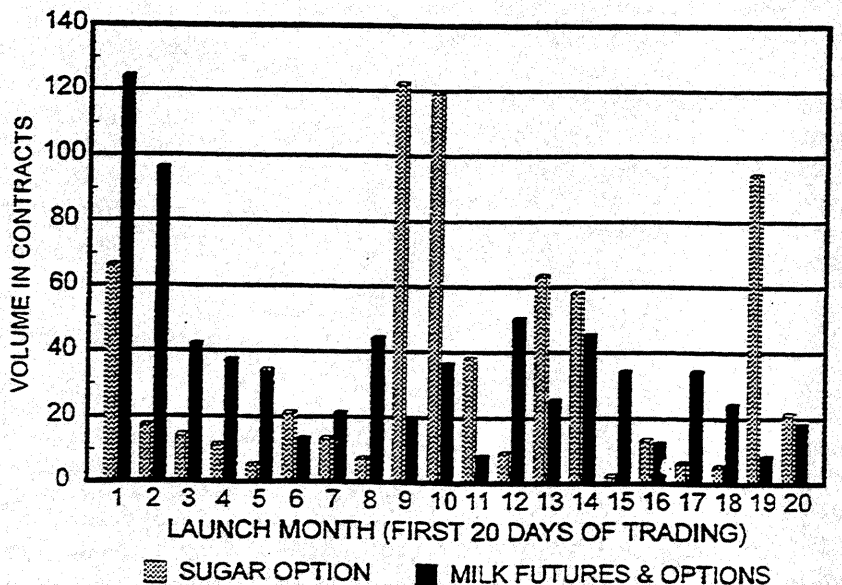
(continued)

SUGAR OPTIONS VOLUME and OPEN INTEREST

(1982 - 1995)



MILK FUTURES & OPTIONS VS. SUGAR OPTIONS VOLUME



Today, the CSCE sugar options market is recognized as an indispensable risk management tool, trading an average of 3,000 contracts a day (down from a 1990 peak of 10,786). Market volume did not accelerate overnight, however. In the first full year, 8,255 contracts traded and open interest grew in fits and starts. As shown in the accompanying charts (see cover), volume in sugar options did not grow appreciably until several years after introduction. The first three years of trading were marked by low volume and open interest levels. But then a convergence of increased industry understanding and cash market events pushed volume and open interest higher. Since 1987, sugar options have been a vital source of risk protection during periods of rapidly and widely moving prices.

Similar Beginnings

The challenges facing the Exchange in the early years of sugar options trading are similar to those experienced now with the introduction of milk futures and options. Prior to the markets' launch in December, the CSCE put forth a similarly comprehensive and exhaustive educational effort to reach dairy market participants and teach them about these new products. And while the dairy industry's interest in the markets has been consistently strong and they are receptive to the concept, the milk futures market traded 72 contracts during its first 20 days of trading. The milk markets, much like the sugar options market, need to reach a certain level of understanding and knowledge among market participants, combined with a need for risk management. Things are progressing as volume picks up and the market reached a new record open interest of 362 contracts on May 9, 1996.

The industry's learning curve, while steep, lessens every day. Interest in the markets remains strong, from different levels of the dairy marketing chain. The exposure to price risk is there. And in time, the comfort level will be there, too.

Milk Futures and Options Prices on Internet

Daily prices of the CSCE milk futures and options markets are now available through the World Wide Web (WWW) portion of the Internet. Simply go to the Exchange's Home Page at **http://www.csce.com** and access the Daily Market Report (DMR). The DMR features daily market activity in each of the CSCE's future and options contracts, including opening and closing prices, daily high/low, settlement prices, open interest and volumes. Each day's market activity is added to the report between 5:00 and 7:00 PM New York Time daily.

Brokers Interested in Markets

A marketing effort, conducted in conjunction with the National Introducing Brokers Association, drew responses from 20 brokers interested in working with farmers to develop hedging programs using the CSCE milk futures market. For more information call Kevin McCormick, marketing manager, at 212-742-6103.

TAKING CONTROL OF MILK PRICE RISK

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- How to use Hedging as a Risk Managment Tool
- How to Lock In Prices for Future Milk Production
- How to Hedge Ingredients Costs
- What are Options and How to Use Them

Presented By
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JANUARY 25, 1996

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

What does the Milk Futures Price Represent?

Paul Christ
Vice President,
Planning and Analysis/ Dairy Group
Land O'Lakes, Inc.
&
Jeffrey E. Levin
Vice President/Chief Economist
Coffee, Sugar & Cocoa Exchange, Inc.

With the advent of the new milk futures and options contracts on December 12 and 13, 1995, several market users have asked the Coffee, Sugar & Cocoa Exchange, Inc. (CSCE) about the pricing basis of the new CSCE milk futures contract. In response, Mr. Christ and Mr. Levin drafted the following analysis, which has been adapted for On the Dairy Markets. *Please note that this analysis is merely the informed opinion of the authors.*

—William Whitmoyer
Financial Writer

The CSCE milk futures contract has been structured to price Class III milk, which is milk used to manufacture hard dairy products (cheese and butter). In developing the contract, the CSCE and industry dairy experts incorporated the standard commercial practices of the milk industry to the fullest extent possible, including class differentials and minimum prices as required by the Federal Milk Marketing Orders (FMMO). Incorporating the cash market delivery requirements into the futures contract ensures that commercial standards for delivery facilities, quality specifications and minimum prices are replicated for deliveries through the milk futures contract. Even though, on average, only a very small percentage of futures contracts traded actually result in delivery of the underlying commodity, the delivery mechanism must be consistent with the commercial market. This consistency bolsters contract integrity through a futures price which accurately reflects the cash market price.

The result is a CSCE milk futures price which reflects the Class III milk price. The deliverer who sells milk through the futures contract will receive the same net payments using the futures market, regardless of how the milk is ultimately used in production, after payments to and from the FMMO market administrator are taken into account. The receiver who takes milk through the futures market will pay a net price that is dependent on milk usage and the resulting FMMO differentials—just as in the cash market. This makes sound economic sense as the usage—and therefore the cash flow—is determined by the buyer.

In a milk futures market delivery, the payment flows for any class of milk is dependent on the level of the futures delivery price, just as it would be for any other commodity such as grain. So, for all market participants, the level of the futures price, not the specific usage of the milk, determines any difference in profitability for their hedging positions.

Mechanics

The minimum Class III price is the USDA reported Basic Formula Price (BFP), formerly the Minnesota-Wisconsin (M-W) price. FMMO class differentials in the milk futures contract include the Class I differential for fluid milk, the Class II differential for milk used for soft dairy products, and the Class III-A differential for milk used to produce nonfat dry milk. These differentials are all calculated relative to the BFP for the delivery month and are incorporated into the final settle-

(continued)

ment for any milk delivery on the exchange. In addition, because proprietary firms may be required by FMMO regulations to pay no less than the announced minimum class price for milk, the futures contract has been structured to require any proprietary firm taking delivery on the futures contract to pay no less than the minimum price, if required to do so by FMMO regulations.

Actual cash prices in the Chicago Regional order, which is the delivery region for the milk futures contract, tend to reflect movements in the BFP. However, these prices can and do vary from FMMO minimum prices, as the actual cash price is based on supply and demand in that particular market and therefore is often above the minimum class price. Since the milk futures price is structured to reflect the Class III price, any movements in the BFP price will be reflected in the Chicago Regional order price. Futures market participants will enter into contract positions to hedge against price risk for the milk they will be buying or selling. They know that the FMMO regulations are incorporated into the contract delivery procedures so that the price being hedged is the Class III price (and ultimatley the BFP).

A few examples should help clarify the pricing regime. As delivery against the milk futures contract is from the Madison District[1], which is located within the Chicago Regional Order, September 1995 prices for this federal order will serve as the basis for the examples. These prices are:

Class I	$12.63
Class II	$11.53
Class III	$12.08 (this is the September BFP)
Class III-A	$10.90
Blend Price	$12.30 (price weighted by class usage that is paid to producer)

Based on these prices, effective class differentials are determined by subtracting the Class III, or BFP for the current month, price from each relevant class price. The Class I and Class II minimum monthly prices are calculated by adding predetermined differentials to the BFP price of two months prior to the current month. The Class III-A price is calculated by using a product price formula based on nonfat dry milk cash prices for the month in which the milk is delivered. Therefore, the Class I and Class II prices for September were known when the July BFP was announced, while the Class III and III-A September prices were not known until early October.

In the cash market, a buyer of milk used for Class I, Class II, or Class III-A purposes would pay the class price (i.e., the effective differential for the month in which the milk is delivered in addition to the BFP price for the current month). In a futures market delivery, the appropriate effective differential is used to adjust the futures settlement price. These effective differentials for the September example are:

Class I	$ .55 (12.63 - 12.08)
Class II	- $ .55 (11.53 - 12.08)
Class III	$ .00 (no adjustment)
Class III-A	- $1.18 (10.90 - 12.08)

Futures Market Delivery Cash Flows

As the futures final settlement price can be above, below, or equal to the BFP for that particular month—depending on the conditions in the cash market—the three following examples incorporate different futures final settlement prices to provide for all possible results in the cash market. Example one is based on a futures settlement price of $12.08/cwt., exactly equal to the BFP for the month; example two is based on a futures settlement price of $13.00/cwt., above the BFP for the month; and, finally, example three incorporates a futures settlement price of $11.00/cwt., below the BFP for the month. For each example, the net cash flow to the buyer and seller is presented for each class of milk in table format.

In the examples, the futures market milk deliverer's cash flow is comprised of two parts: One, the receipt of the futures final settlement price that is adjusted by the appropriate class differential; and, Two, the required cash flows with the market administrator of the FMMO. The second part is required for any seller of milk pooled in the FMMO.

For the futures market milk receiver, only the net cash flow for the futures delivery, which is the total cost of the milk, is shown in the tables. However, the receiver of the milk, following processing, would sell the finished product in the cash market. The final cash flow would depend on the price the buyer received for the finished dairy product. The buyer determines the total cost of the milk received through futures delivery by deciding whether the milk will be used for Class I, II, III, or III-A products.

In all examples, the tables include the cash flows associated with the delivery of milk through the futures market, but not the price at which the futures contract was originally purchased (for buyers of milk) or sold (for sellers of milk). The price at which the futures position was originally established does affect the overall profitability of the futures transaction for each hedger, but does not impact the cash flow through the delivery process.

Note: For both the buyer and the seller, lines one and two in the tables reflect the cash flows for the futures market delivery. Lines three and four—for the seller only—represent the required cash flows in the FMMO for any milk that is to be pooled as the FMMO still regulates the money movement associated with milk sales. Line three in example three—for the buyer only—represents the adjustment to the settlement price for a proprietary firm, to raise the net price to the class minimum.

[1] The Madison district includes: Illinois counties of Boone, Carroll, Cook, De Kalb, Du Page, Jo Daviess (except East Dubuque), Kane, Kendall, Lake, Lee, McHenry, Ogle, Stephenson, Whiteside (only townships of Caloma, Hahnaman, Hopkins, Hume, Jordan, Montmorency, Sterling, Tampico), Will, and Winnebago and Wisconsin counties of Columbia, Dane, Dodge, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock, Sauk, Walworth, Washington, and Waukesha.

EXAMPLE 1
Futures Price ($12.08) is equal to the BFP ($12.08)

[ACTUAL USE OF MILK]

Seller	Class I	Class II	Class III	Class III-A
1. Receives futures settlement price from buyer	$12.08	$12.08	$12.08	$12.08
2. Effective Differential Adjustment	+ .55	- .55	+ .00	- 1.18
A. Net futures delivery cash flow (1+2)	**$12.63**	**$11.53**	**$12.08**	**$10.90**
3.Pays Class price into the Chicago Pool	-12.63	-11.53	-12.08	-10.90
4.Receives Blend Price from the Chicago Pool	+12.30	+12.30	+12.30	+12.30
B. Net FMMO cash flow(3+4)	**- .33**	**+ .77**	**+ .22**	**+ 1.40**
NET CASH FLOW (A + B)	**$12.30**	**$12.30**	**$12.30**	**$12.30**

Buyer	Class I	Class II	Class III	Class III-A
1. Pays futures settlement price to seller	-$12.08	-$12.08	-$12.08	-$12.08
2. Effective Differential Adjustment	- .55	+ .55	+ .00	+ 1.18
TOTAL COST OF MILK (1+2)	**-$12.63**	**-$11.53**	**-$12.08**	**-$10.90**

EXAMPLE 2
Futures Price ($13.00) is above the BFP ($12.08)

[ACTUAL USE OF MILK]

Seller	Class I	Class II	Class III	Class III-A
1. Receives futures settlement price from buyer	$13.00	$13.00	$13.00	$13.00
2. Effective Differential Adjustment	+ .55	- .55	+ .00	- 1.18
A. Net futures delivery cash flow (1+2)	**$13.55**	**$12.45**	**$13.00**	**$11.82**
3.Pays Class price into the Chicago Pool	-12.63	-11.53	-12.08	-10.90
4.Receives Blend Price from the Chicago Pool	+12.30	+12.30	+12.30	+12.30
B. Net FMMO cash flow(3+4)	**- .33**	**+ .77**	**+ .22**	**+ 1.40**
NET CASH FLOW (A + B)	**$13.22**	**$13.22**	**$13.22**	**$13.22**

Buyer	Class I	Class II	Class III	Class III-A
1. Pays futures settlement price to seller	-$13.00	-$13.00	-$13.00	-$13.00
2. Effective Differential Adjustment	- .55	+ .55	+ .00	+ 1.18
TOTAL COST OF MILK (1+2)	**-$13.55**	**-$12.45**	**-$13.00**	**-$11.82**

EXAMPLE 3
Futures Price ($11.00) is below the BFP ($12.08)

[ACTUAL USE OF MILK]

Seller	Class I	Class II	Class III	Class III-A
1. Receives futures settlement price from buyer	$11.00	$11.00	$11.00	$11.00
2. Effective Differential Adjustment	+ .55	- .55	+ .00	- 1.18
A. Net futures delivery cash flow (1+2)	**$11.55**	**$10.45**	**$11.00**	**$ 9.82**
3.Pays Class price into the Chicago Pool	-12.63	-11.53	-12.08	-10.90
4.Receives Blend Price from the Chicago Pool	+12.30	+12.30	+12.30	+12.30
B. Net FMMO cash flow(3+4)	**- .33**	**+ .77**	**+ .22**	**+ 1.40**
NET CASH FLOW (A + B)	**$11.22**	**$11.22**	**$11.22**	**$11.22**

Buyer	Class I	Class II	Class III	Class III-A
1. Pays futures settlement price to seller	-$11.00	-$11.00	-$11.00	-$11.00
2. Effective Differential Adjustment	- .55	+ .55	+ .00	+ 1.18
TOTAL COST OF MILK (1+2) (non-proprietary)	**-$11.55**	**-$10.45**	**-$11.00**	**-$ 9.82**
3. Minimum price adjustment for proprietary firm*	-$ 1.08	-$ 1.08	-$ 1.08	-$ 1.08
TOTAL COST OF MILK (1+2+3) (proprietary)	**-$12.63**	**-$11.53**	**-$12.08**	**-$10.90**

As these three examples show, the net payments on the futures portion of the transaction by the buyer to the seller will vary depending on the class usage. This is due to the class differential adjustments, which replicate cash market transactions. After incorporating the cash market portion of the transaction (flows to and from the market administrator), the class usage of milk by the buyer does not alter the effectiveness of the futures contract.

Because the CSCE milk futures contract was designed to reflect the Class III milk price, which is the basis for all prices in the FMMO, the futures contract provides for equal hedging effectiveness against milk price risk by all buyers and sellers of milk. For more information about the CSCE milk futures contract, please call the Exchange at 1-800-HEDGE IT, (212) 742-6100 or fax: (212) 748-4321.

*If the buyer is a proprietary firm, the buyer may be required to pay no less than the minimum price for the milk, irrespective of the futures delivery price. The Federal Milk Market Administrator would determine whether minimum class prices apply based on the nature of the transaction. The milk futures contract accomplishes this by requiring an additional payment equal to the difference between the BFP and the futures delivery price. In this example, that payment is equal to $1.08 ($12.08 - $11.00). This will be an additional cash payment to the seller, increasing the net cash flow for each class to the USDA minimum class price.

JULY 21, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

CSCE to Embark on Ambitious Milk Launch Plan

On June 14, the Coffee, Sugar & Cocoa Exchange's Board of Managers approved an aggressive milk futures launch plan, as recommended by the New Product Development Committee.

Since the mid-1980s, milk price volatility has risen dramatically. And currently, milk—the cornerstone of all dairy products—is a $19.8 billion industry without the ability to protect against this uncertainty. Milk futures and options will provide the dairy industry with the risk management tools necessary to protect against future unexpected price movements.

Before milk futures can achieve this prominent role in the industry, a number of pieces must come together to create an immediately active, useful futures market. Potential market users must be educated. Brokers must be informed and motivated. And, speculative capital must be generated.

Education is Key

The most important element of the efforts to successfully launch milk futures is perhaps education. With milk futures, for the first time, everyone in the dairy industry from farmer to retailer will have the opportunity to manage the risks associated with volatile milk prices. While the Exchange has worked diligently to introduce the dairy industry to the concepts of futures-based risk management, creating higher levels of awareness and understanding remains important. To do so, the CSCE has outlined a multi-faceted education plan that includes:

• New informational literature that will explain, in simple language, the process of hedging price risk in the milk futures market.

• Introductory seminars to be held in several cities around the country to introduce the dairy community to the concepts behind the milk futures contract. Coupled with teleconferences, dairy industry participants will receive ongoing re-enforcement on how to use the market.

• Teleconferences that will allow dairy industry participants to listen in on detailed explanations of milk futures hedging at their convenience. A full package of teleconference materials will be distributed prior to the meetings, so all participants can follow along with the instructor. Interested participants also will be able to ask questions about the markets.

• Hedging workshops exploring the details, in step-by-step fashion, of establishing a milk price risk hedging program. The workshops will likely feature dairy economists who have a detailed understanding of the benefits of the milk futures contract.

• Individual meetings between Exchange officials, brokers and an interested firm's employees or groups of cooperative

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HELPING A COOPERATIVE GET STARTED

To reach as many as possible of the 155,339 producing dairy farms in the United States, the CSCE plans to work closely with dairy cooperatives interested in having their management and patrons be aware of the potential benefits of milk futures trading. Among other things, the Exchange can:

- hold one-on-one meetings with co-op managers;
- Provide customized educational literature and materials;
- conduct co-op specific teleconferences;
- develop specialized milk hedging materials for direct mail to co-op patrons
- conduct individual seminars
- present at board meetings and/or patron meetings.

Contact the CSCE Marketing Department for more information.

1-800-HEDGE IT or 212-938-2966
FAX 212-524-9863

Ambitious Milk Launch Plan
(continued)

members will be held as frequently as possible. These personalized meetings have traditionally produced heightened levels of understanding and can address a group's specific needs.

Permits to Allow Brokers Easy Access
When the dairy industry is ready to trade, someone on the CSCE trading floor must be prepared to execute their orders. Attracting a population of floor brokers to a new market can be difficult as our existing contracts offer far more immediate opportunities. Thus, the Exchange has devised a "Permit Program" designed to create a core of milk-dedicated executing brokers.

In short, the permit program will allow interested floor traders to access the dairy market without the cost of obtaining a CSCE membership. The program will offer up to 25 transferable trading permits to non-CSCE members for a nominal cost of $2,000. The fee is refundable if the permit holder meets certain volume criteria over the two years that the program is in effect. In addition, the permit holders will be eligible for permanent dairy trading rights if the holder is responsible for only 2% of the two year volume (up to five permits will be awarded to an individual).

For the industry, the permit program means that more traders will be in the dairy ring at the Exchange, providing more liquidity to the markets. Full CSCE members are able to trade the markets and CSCE associate members will be allowed to trade the dairy futures and options markets for two years after introduction without cost, further boosting liquidity.

In addition, New York Cotton Exchange (NYCE) and its affiliate members have been invited to trade in the CSCE dairy markets for the two years that the milk permits are outstanding. Not only can the NYCE members aid liquidity in the markets, but they also have ties to orange juice producers—many of whom also are active in the milk market. And NYCE members and CSCE associate members also are eligible to receive permanent dairy trading permits if they meet the 2% requirements.

Market Makers to "Take Other Side"
Another difficult part of new market development is developing the initial presence of speculative capital. By taking the other side of industry orders, speculators provide an invaluable service to the marketplace. However, speculators have been historically reluctant to immediately participate in new markets, particularly today as the bulk of speculative capital is in the hands of large Commodity Trading Advisors who must see liquidity develop before they will participate in a market.

The CSCE Milk Market Maker Program has been structured to create instant speculative participation and corresponding liquidity. The program calls for two $100,000 loans to be made to two traders agreeing to be present in the ring and make bids and offers at all times. For example, while specific terms of the program have not yet been finalized, a milk market maker might be required to maintain a $0.20/cwt. bid offer spread for five contracts at all times. That means that if the market maker offers to sell a particular contract month at $12.00/cwt., the market is assured that the market maker's bid to buy will be at least $11.80/cwt., which is only a $100 difference on a $6,000 milk contract.

Washington D.C. Milk Presentation

On July 17, Paul Christ, Land O'Lakes, Inc. Dairy Group Vice President, James Bowe, CSCE Senior Vice President/Market Development and Planning and Janet Troy, CSCE Vice President/Marketing and Communications went to Washington D.C. to meet with the United States Senate and House of Representatives Agricultural Committees staff members and present an overview of the new CSCE milk contract. Afternoon meetings included discussions at the United States Department of Agriculture (USDA) and the National Milk Producers Federation Summer Board Meeting.

Milk Futures Contract Status

Awaiting Commodity Futures Trading Commission (CFTC) Approval

In the next issue of
On the Dairy Markets

Interview with Jamie Zimmerman, Director of Farm Management Services at Dairylea Cooperative, Inc.

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC

ON THE DAIRY MARKETS

Alto Dairies to Offer Farmer Members Fixed Prices for Milk Months in Advance of Delivery

Wisconsin Department of Agriculture Grant Paves Way for Pilot Program

Beginning in late July or early August, Alto Dairies Cooperative will offer its farmer members an opportunity to lock in prices for their milk production months in advance. The cooperative, based in Waupun, Wisconsin, is embarking on a program that will use fixed forward contracts with prices pegged to levels obtained in the CSCE's Cheddar cheese futures market.

Alto Dairies' program — believed to be the first of its kind in the dairy industry — will be facilitated by a grant from the Wisconsin Department of Agriculture, Trade and Consumer Protection, awarded to Blimling and Associates, a Wisconsin-based grain and dairy marketing firm.

Roger Blimling, of Blimling and Associates, is also a registered futures broker. He has been working on various risk management strategies with Alto Dairies since the inception of dairy futures and options trading last June. Hoping to broaden the scope of the cooperative's hedging to directly benefit individual dairy farmers by forward contracting milk, Mr. Blimling applied for an Agricultural Development and Diversification Grant to help defray training and operations costs of a one-year "pilot program".

Real Benefits for Dairy Farmers

"Alto Dairies is very pleased to participate in this pilot program, whereby our dairy farmer members can forward contract their milk production with the dairy at a known price," said Larry Lemmenes, CEO of Alto Dairies. "This will allow our members to manage risks and will provide a beneficial marketing alternative.

"A significant element of this pilot program is the opportunity for education, training and understanding in the use of the futures markets for our members, as well as the development of strategies and models which can be adopted by the dairy industry in general," added Mr. Lemmenes.

"It makes sense for the industry to offer forward contracting to its customers and members," said Mr. Blimling. "Dairy farmers need to have the same opportunity to lock in prices that their peers in other agricultural sectors have enjoyed for decades.

"I view this as an opportunity for the dairy industry to provide additional services to members and customers," added Mr. Blimling. "Forward contracting with producers benefits the industry as a whole. This program focuses on the producer level. That's logical because the producer-level is where price risk is first encountered. Of course, there's risk on every level of the marketing chain, and eventually the practice of forward contracting and price risk management with futures will spread throughout the industry."

Boost for Contracts

The concept of offering fixed price forward contracts to dairy farmers has recently moved front and center in the CSCE's efforts to cultivate liquidity in its dairy markets. In the past two months, the Exchange has widely circulated a report (*New Milk Marketing and Procurement Tools*) outlining methods for offering such contracts. The report has been well received, with many in the dairy industry indicating their belief that inviting farmer participation (either directly or indirectly) is perhaps the best route to building a healthy market.

Exchange officials are hopeful that Alto's program will boost activity in the dairy contracts, and lead to similar efforts by other dairy cooperatives.

"We launched these products because of dairy price volatility and the lack of tools available to the industry for its manage-

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ment," said CSCE Chairman Charles H. Falk. "Although development has been slow, the industry's need for risk management remains very real. This program demonstrates that the industry is beginning to understand how to use these new tools."

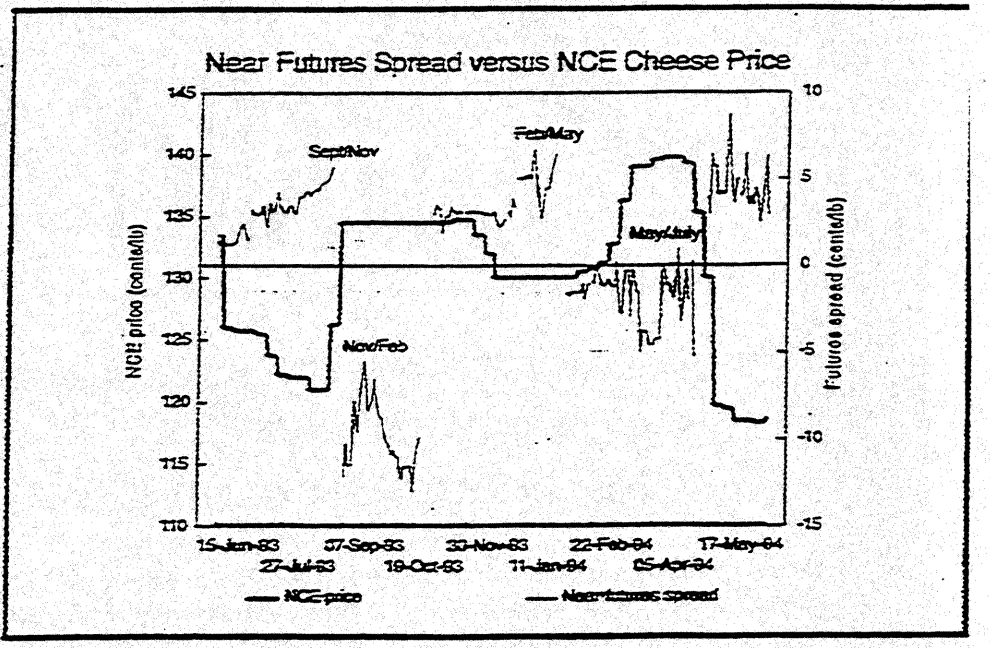
"We can't lose sight of the fact that price volatility and the search for risk management tools are entirely new to the dairy industry," said CSCE President Bennett J. Corn. "Developing a market is an evolutionary process."

"Trading activity has been light, but information requests have been steady," added James J. Bowe, CSCE senior vice president/market development & planning. "More than 100 key dairy firms have opened accounts to trade. As this program and others like it begin to attract commitments, the market will grow and build liquidity."

Exchange Willing to Help

As part of its effort to introduce the fixed price forward concept, the Exchange has prepared a "marketing kit" that dairy cooperatives and proprietary firms can adapt for their own use when implementing a program. Copies of these marketing packages were recently sent to key dairy cooperatives. Additional copies are available by calling the CSCE's Marketing Department at 1-800-HEDGE IT or 212-938-2829 (FAX 212-524-9863).

Do Cheese Futures Prices Predict Cheese Cash Market Prices?



A major function of futures prices is providing information about market participants' views of the future. Many studies have shown that futures prices are the best predictors of future cash market prices. The introduction of CSCE Cheddar cheese futures contracts last year offers a unique opportunity to explore this proposition.

The chart above shows settlement prices for Cheddar cheese near-spreads from the beginning of trading on June 15, 1993. The cheese futures spreads shown represent the difference between the price of the nearest futures contract and the second nearest on a per pound basis. For example, the September/November spread represents the November futures price minus the September futures price. Each spread reflects a two or three month outlook of the difference between spot futures and the subsequent expiring futures contract. Also shown are weekly cash market prices for blocks of cheese as determined at the National Cheese Exchange each Friday.

An examination of the information reveals a consistently strong premium for future delivery from late June through August, 1993, indicating an expectation of higher prices at that time. Cash cheese prices then soared on August 27, 1993, and September 3, 1993. From late September to early November, 1993, the pattern reversed and an extremely strong discount existed. This indicated a market expectation of lower prices. Cash prices then fell in early December, 1993. A subsequent period of high premiums then occurred in January through February, 1994, preceding the sharp increase in cheese cash prices in late March and early April. Significant discounts then preceded the sharp May drop in cheese cash prices. Apparently, the futures market correctly anticipated cash market moves based on this anecdotal evidence.

Please note that this analysis is based on "a look backwards" in time and does not necessarily indicate what may happen in the future. Cheese futures spreads may or may not serve as an accurate forecasting tool beyond the time period examined.

JULY 7, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Cambridge Financial Develops Five-Step Dairy Risk Management Program

Cambridge Financial Management, Inc. is located in Cambridge, Massachusetts, and provides money management advisory services in stock, bond and commodity markets. Cambridge Financial Management is registered with the Securities and Exchange Commission (SEC) as an Investment Advisor and with the Commodity Futures Trading Commission (CFTC) as a Commodity Trading Advisor (CTA). Cambridge Commodities Corporation, a subsidiary, publishes the monthly, "The Dairy Markets Financial Advisor," to advise dairy clients on hedging and trading strategies.

— *William Whitmoyer*
CSCE Financial Writer

Jim Kneafsey, President of Cambridge Financial Management, Inc., has developed a five-step risk management program for dairy firms. With hedging in the dairy futures and options markets as its core focus, the five-step program consists of assessing a client's risk profile; establishing a hedging strategy; applying hedges; monitoring hedges; and lifting hedges. The goal of the program: to lessen the negative impact of cheese and milk price changes on a dairy firm's bottom line.

"If you are in the dairy business, changes in the price of cheese or milk can have a big impact on your firm," Mr. Kneafsey said. "And the best way to protect against price risk in this situation is to hedge in the Cheddar cheese futures and options markets.

"That's the theory. But how do you use the theory to create a risk management program?," Mr. Kneafsey asked. "To answer that question, we developed our five-step risk management program."

Step One:
Risk Profile

The first step is assessing a client's risk profile. Mr. Kneafsey takes into account a client's business structure, production levels, and comfort with risk to form a profile. In some cases, clients are comfortable with only futures or options, or their business charters prevent them from using certain risk management strategies.

By creating a risk profile, Mr. Kneafsey is able to determine the client's optimal hedge ratio, which is the amount of cheese which should be hedged. In most cases, Mr. Kneafsey develops a prototype program for hedging price risk on a small portion of the total cheese production over a six month period.

"It's like testing a new airplane," Mr. Kneafsey said. "You know this new airplane will help you become more efficient, but you want to take it out and fly it around on a few test flights before putting it into full service."

Step Two:
Establishing a Hedging Strategy

Using the risk profile and optimal hedging ratio, Mr. Kneafsey then moves to the second step: establishing a hedging strategy by determining the precise transactions to be made in the futures and options markets. He establishes target prices by applying the Horton International Dairy Industry Pricing Forecast. This proprietary forecast predicts expected future price ranges for different dairy products.

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If the forecast calls for higher cheese prices in the future, a cheese user would want to lock in today's lower prices with Cheddar futures while a cheese producer would want to take advantage of possible higher cash market prices. And, if it fits the client's risk profile, Mr. Kneafsey would advise that the cheese producer purchase options as an "insurance policy" against the forecast being incorrect. If the forecast calls for lower prices, then the cheese producer would want to lock in current prices while the cheese user would want to take advantage of the possible lower cash market prices.

Step Three:
Applying the Hedges

The third step is applying the hedges. Mr. Kneafsey works with clients on two levels, as a hedge advisor or as a hedge implementor. As an advisor, Mr. Kneafsey recommends individual hedging positions and the client is responsible for executing the transaction through its own brokers. As an implementor, Mr. Kneafsey holds a limited power of attorney to place the orders himself through Cambridge Commodity Corporations's regular floor brokers.

Mr. Kneafsey uses the Horton International Dairy Price Forecast and other technical trading systems to help him advise clients. But, Mr. Kneafsey stresses, he is only able to do what the market allows him to do for the client. If he advises purchasing 120 put options for a premium of 2.00 cents/lb., and prices never reach that level, Mr. Kneafsey is unable to establish the hedge at that price level.

To set up a futures or options account, the hedging client makes a deposit with a broker. The deposit amount depends on the client and the hedging program, but Mr. Kneafsey says the range runs from $10,000 to $50,000. In some cases, these deposits earn interest. This money is used to pay for option premiums or futures margin. Options are purchased outright for the premium amount, but futures contracts are purchased on margin. Margin is a good faith deposit which allows the hedger to control a futures contract without paying the full cash value of the contract.

Many clients choose to hire Mr. Kneafsey as a hedge implementor. "A cooperative's bread and butter is taking milk and making cheese. Our bread and butter is financial risk management," Mr. Kneafsey explained. "Risk management is a financial transaction, a separate function from production which helps manage production risk."

Steps Four and Five:
Monitoring and Lifting Hedges

In the fourth and fifth steps of the risk management program, Mr. Kneafsey monitors the hedge positions throughout their lifecycle and advises the client when to lift the hedge. Here again, if Mr. Kneafsey is a hedge advisor, he will advise the client when to make certain financial moves; as a hedge implementor, Mr. Kneafsey will oversee the financial moves through Cambridge's organization.

As a hedge advisor or implementor, Mr. Kneafsey bills for his services in three ways: as a percentage of the hedge amount, as a percentage of the hedge gain, or a combination of the two fees.

Hedging risk is a continuous process, so each client receives monthly and annual purchase and sale statements, which detail all futures and options trading and current active positions in the account. This allows a client to compare the financial results of the hedged versus unhedged cheese production on a pound per pound basis.

"The whole idea of the five-step program is to allow the firms to see how the process works," Mr. Kneafsey said. "Eventually, the Cheddar market will grow to the size where firms can hedge their entire cheese production, and our clients will have the necessary experience to make the markets work for them."

Hedging Basics

Futures contracts allow a hedger to lock in a set price for an upcoming cash market purchase or sale, no matter if the cash market prices rise or fall. Options contracts provide the hedger with the ability to create a minimum price floor for a sale or a maximum price ceiling for a purchase. If prices move below the minimum price floor or above the maximum price ceiling, then the options are valuable and provide protection. If prices remain favorable (prices are above the minimum price floor or below the maximum price ceiling), the options are not exercised and the hedger loses only the premium payment. At the same time, the hedger can take advantage of the more favorable market price.

In the next issue of
On the Dairy Markets

More details about the innovative CSCE milk futures contract...

SEPTEMBER 1, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Protect Your Milk Price

Buying and selling cheese futures is one way to smooth out the milk price coaster ride. But first you need to know a few things

By Paula Mohr

This article is reprinted from the August, 1995, issue of Dairy Today, *with permission.*

Linnea and Joel Kooistra knew last October that they would get at least $12.50/cwt. for their May 1995 milk. How so? The Woodstock, Ill. couple locked in a milk price by trading Cheddar cheese futures.

"We decided we had to do it," says Linnea, who trades grain futures and purchases dairy feed on contract. The Kooistras own and operate a 1,400-acre cash crop/dairy farm with 225 cows. Their herd average is 23,000 lb. milk.

"I didn't see milk prices going up and overall, the government is getting out of the dairy business," Linea says. "I only saw volatility."

After carefully watching Cheddar cheese futures and listening to dairy outlook reports last fall, she learned that economists were predicting a price tumble from a $12.29 October M-W to $11 in the spring. In October last year, May 1995 cheese futures were going for $1.25/lb. on the New York Coffee, Sugar & Cocoa Exchange (CSCE). For the Kooistras, that cheese price translated into an $11.50 M-W plus a dollar or more for premiums.

"We knew we could make money on $12.50 milk," Linnea says, "so we locked in half of our production at $1.25/lb. (and sold two contracts of Cheddar cheese)." One contract is equal to 10,500 lb. of cheese or 105,000 lb. of milk. Two contracts for the Kooistras are equivalent to half of their herd's milk production. Their cows produce 400,000 lb. of milk a month.

Cheese futures went down to $1.21/lb. late last year and bounced back up to $1.25/lb. in January. Not wanting to risk another price drop, Linnea sold two additional May cheese futures contracts at the $1.25 price, thereby locking in all their May production.

By April, cheese futures had dipped to $1.18-$1.19/lb. It was time for the Kooistras to cover themselves by purchasing cheese futures contracts before their May cheese contracts matured. They bought cheese contracts at these prices and made a net profit of $2,300 (see box on back).

The M-W fell 78¢ in April so we only took an 18¢ drop while others took a greater one," Linnea says.

That was Linnea's first time trading cheese futures, and she's waiting for the right price to do it again. "We haven't locked in anything yet (for the fall). We want November cheese at the $1.30 level. Now (late June) it's at 1.28. It has got a bit to go." Meanwhile, Linnea keeps watching the markets and the weather. She sees the possibility of another drought this summer, causing feed costs, milk production costs and milk prices to rise.

"Because I see the chance of milk prices going up, I don't see any reason to hedge," she adds.

The concept of trading in dairy futures to reduce market risk is still relatively new and untested by most producers. Linnea's experience paid off because she did her homework before playing the market. Sometimes, however, the outcome for cross-hedging will be less than the current milk price.

"There will be times when the market price is higher than the one locked in through the futures markets," says Bob Cropp, University of Wisconsin agricultural economist. "But if you know your cost of production and your price objective, you should always get your price objective."

Trading in futures and options on Cheddar cheese and powdered milk began in June 1993 on the CSCE. So far, participant numbers have been low. Most business is conducted by dairy companies and cooperatives. Only a handful of producers have traded futures through brokers. Why?

It's a chicken or the egg situation, Cropp says. Dairy companies and co-ops have used the futures sparingly to lock in cheese inventory values. Limited use means limited activity. Plus, there has not been much interest on the part of speculators. Speculator activity creates

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Protect Your Milk Price
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the liquidity in the market. So you need both hedgers and speculators in the futures market. However, Cropp is optimistic that participant numbers will grow.

"It usually does go slow," he says. "It took three years for the sugar contracts to get going." Cropp surmises that producers have been hesitant to trade futures for several reasons: lack of interest, too busy, unknown costs of production, lack of understanding about futures. "Some say it would be easier for the milk plant to do it so they won't have to spend time studying the markets," Cropp says.

One co-op decided to test the trading waters and ran a pilot project from July 1994 to February 1995 offering fixed cash forward contracts to its patrons. Alto Dairy, Waupun, Wis., received a state grant to start the project and used the money to cover administrative costs. The co-op now handles contracts for about 130 producers and doesn't charge extra for the service.

"We establish a price we think we can sell cheese at on the exchange and offer that in the form of a milk price to our patrons," says Don Desjarlais, Alto's vice president of finance. For example, Alto's base price paid to patrons for May was $11.50. For those producers who locked in forward contracts earlier, they received $12/cwt. By going through their co-op, producers replace their cost risk with the co-op's assumption of the basis risk. Basis is the relationship between the cash and futures prices. When a hedge is set, the basis is often the predicted difference between the cash price and the futures price. Basis risk is less than price risk because basis is easier to predict than price and is less variable than price.

"Remember, we're not trying to predict what the milk price will be in the future. We tell our producers, based on what the futures market is yielding this day, we can offer you this price. If it's good for you, take it," Desjarlais says.

You can now trade cheese and non-fat dry-milk futures. By year's end, you may be able to trade fluid-milk futures and options. The Coffee, Sugar & Cocoa Exchange and the Chicago Mercantile Exchange have petitioned the Commodity Futures Trading Commission to trade fluid-milk futures and options. The Commission has until next spring to approve fluid-milk contracts. Industry insiders expect the fluid contracts to be available this fall. Fluid contracts will trade in 50,000-lb. allotments.

Cross-Hedging By the Kooistras

Cash Market	Futures Market
	Oct. '94: Sold 2 May cheese contracts @ 125.00 ($1.25/lb)
	Jan. '95: Sold 2 May cheese contracts @ 125.00 ($1.25/lb)
Sold April Milk (410,000 lb) for $12.90/cwt.	April '95: Bought 3 May cheese contracts @ 119.00 ($1.19/lb). Bought 1 May cheese contract @ 118.00 ($1.18/lb)

Futures Profit
$2,500.00
- 200.00 commission/fees
$2,300.00 net profit

$2,300 divided by 400,000 lb. milk=.575¢/cwt

April milk price $12.90+.575=$13,475 net price for April milk

Wanna trade? Where do you start?

When trading on the futures market, you don't actually trade cheese or powdered milk. You are trading contracts of commitment for future delivery. Transactions are simply on paper. In rare cases, contracts are allowed to mature and you need to deliver commodities. But you don't want to wait until your contract matures, otherwise you'll have to buy or sell a load of cheese.

Before locking in cheese futures prices, you need to do your homework. First, you need to contact a broker, open an account and sign a hedging contract. Next, you need to study the markets and read outlook information. Know what your cost of production is and establish a price objective. Then sell a portion of your milk, says Bob Cropp, University of Wisconsin agricultural economist. He suggests selling, at the most, 50% to 60% of your milk.

"I say 'sell' because as a dairy farmer, you produce milk. Hedging is doing the opposite things on the futures market," he says. "You sell cheese on the futures market and buy it back later. But don't wait for the last day or two of the contract to buy it back or you may get stuck with a commitment to deliver cheese, especially since there's not much liquidity."

Here are some basics to think about if you're interested in futures:

*For you, the hedger, futures markets are used to protect price and profit objectives in the cash market. You deal in both the cash and futures market and expect that any loss in one market will be offset by a gain in another market. You shift the risk of price change onto a speculator.

*There is a closer relationship between cheese prices and the M-W than nonfat dry milk and the M-W. That's why producers have been buying and selling cheese futures.

*If you're interested in learning more about futures, contact the Coffee, Sugar & Cocoa Exchange in New York, 1-800-HEDGE IT. The exchange has a number of publications explaining dairy futures and option markets. It also has a broker list. Get the list and call a couple of brokers for information.

*When talking with a broker, ask if he or she works in agricultural markets, specifically dairy. You want a broker familiar with your market, not one specializing in bonds or foreign currency, says Mike Downes, a Wisconsin dairy farmer and commodity broker with Rosenthal Commodity Group in Chicago. Downes suggests that you also ask if they are members of the commodity exchange, how much margin ("good faith") money they require, what their commission fees are, if they have direct phones to the exchange and if they call clients when they see activity.

AUGUST 14, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Dairylea Establishes Fixed-Price Forward Contracting Program

Jamie Zimmerman is the Director of Farm Management Services at Dairylea Cooperative Inc., based in Syracuse, New York. On June 6, 1995, Dairylea started a forward contracting program, offering its members fixed prices and managing milk price risk by utilizing the Cheddar cheese futures market. To prepare, Dairylea studied the success of the fixed-price forward contracting program at Alto Dairies, which was the first cooperative to begin using the hedging tools available in the futures market. Although Dairylea's program has only just started, "On the Dairy Markets" spoke with Mr. Zimmerman about his experiences establishing a program.

—William Whitmoyer
Financial Writer

On June 6, 1995, Dairylea Cooperative Inc. of Syracuse, New York, announced the introduction of a fixed-price forward contracting program for its member's milk. The program allows co-op members to establish forward contracts with the cooperative at a fixed price to help them manage milk price risk. In turn, the co-op hedges the price movement risk in the Cheddar cheese futures market at the Coffee, Sugar & Cocoa Exchange, Inc.

"Milk price fluctuations have gotten greater in the past five years, and this price volatility has impacted our dairy farmers," Mr. Zimmerman said. "So Dairylea's reason for introducing the program is simple."

Dairylea calculates the bid prices to mirror the Federal Order Two Blend Price, the price that most Dairylea farmers receive. The co-op bases these prices on the price levels of the CSCE Cheddar cheese futures market. To access the forward contracting program, Dairylea members call a recorded price line, and listen to bid prices for up to six months in the future. If an offered milk price is attractive, the producer can transfer the call to a co-op staff member to write a forward contract. In turn, the co-op hedges the price movement risk in the Cheddar market.

After studying the concept of forward contracting programs (*On the Dairy Markets,* July 13, 1994), Dairylea spent several months designing their own program to hedge in the Cheddar cheese futures market. However, Mr. Zimmerman said, when the CSCE introduces the new milk futures contract, milk futures may prove even more efficient for Dairylea because of the closer correlation to the basic formula milk price.

"Since Dairylea is a marketing co-op, we have no manufactured products to sell," Mr. Zimmerman said. "So we must be very certain about our hedging strategy. Currently, we have to make the jump from cheese to fluid milk prices. If it's already made for us, as with a milk futures contract, then we don't have to worry about it."

Dairylea studied the feasibility of a forward contracting program after receiving inquiries from several of its members. As was to be expected, some co-op members were not familiar with their new-found ability to influence their future milk income.

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Jamie Zimmerman
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"Some dairy farmers have experienced forward contracting on the feed side of the business, but for many, this is a new concept for the income side of the operation," Mr. Zimmerman said. "The opportunity to lock in a price on milk income has never been available, so the challenge is bringing people up to speed and educating dairy farmers about the positive and negative of forward contracting.

"We decided to offer this program — as opposed to the members hedging themselves — because it's easier for the cooperative to apply the time and management expertise to this task than for the individual members to take the time out of their day," Mr. Zimmerman added. "Since we work for our membership, one of our goals is to develop tools and services that help them improve their bottom line."

Although the program takes some co-op time to manage, Mr. Zimmerman feels it is worthwhile because the program is of great benefit to the producers.

"It takes time to learn about hedging and bring people along to see the benefits of hedging, but the exciting thing is that these tools are available," Mr. Zimmerman said. "Dairy farmers can lock in margins, and use that to their benefit. If people are concerned with their future milk production income, they have the ability to lock in this level of income and get rid of price change risk. If they are in an expansion mode or they are looking to borrow money for some other reason, having some amount of their production contracted helps them with a guaranteed income. That is a pretty powerful tool to use when approaching a lender, as opposed to just saying we think the price of milk is going to be this or that in the future."

If you would like more information on fixed-price, forward contracts or the new milk futures contract, please contact the Exchange Marketing Department at 1-800-HEDGE IT, (212) 938-2966 or FAX: (212) 524-9863.

Milk Futures Contract Status

Awaiting Commodity Futures Trading Commission (CFTC) Approval

1-800-HEDGE IT

SEPTEMBER 29, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

More Dairy Producers Need to Lock in Prices in the Futures Markets, Says Wisconsin Producer

Since the introduction of the Cheddar cheese futures contracts in 1993, many dairy producers have been using the futures market to lock in a milk price for upcoming production, thus reducing their price movement risk. Some producers lock in a price through a cooperative-run hedging program, but many producers hedge on their own by opening a hedging account with a broker. Brad Brunner is one such producer, and On the Dairy Markets *spoke to him about his experiences.*

—William Whitmoyer
Financial Writer

Cecil, Wisconsin, dairy farmer Brad Brunner urges dairy producers to start locking in a milk price to protect farm income by hedging in the Coffee, Sugar & Cocoa Exchange, Inc.'s Cheddar cheese futures market.

"It's about time the industry uses dairy futures. In fact, it's long overdue."

"Too many people are standing on the sidelines. I don't know why. I guess they just aren't comfortable with the concepts yet, " Mr. Brunner said. "But if everyone did a little bit of trading, then we would have liquidity in the markets and low bid-offer spreads."

Mr. Brunner, a National Milk Producers Federation (NMPF) Advisory Committee Member who milks 200 cows, began hedging in the Cheddar cheese futures market in May 1994. He will hedge up to 200,000 pounds of his farm's 360,000 pound monthly milk production if he feels milk prices will fall.

"For example, if I want to make a minimum of $13.00/cwt., I will put sell orders into the Cheddar futures market for nothing less than 130.00 cents/lb. If the market reaches that point, my orders are filled and I have locked in that price for my chosen month's production."

With the current low volume in the Cheddar market, Mr. Brunner is patient when entering the market. He places orders with his broker to sell Cheddar contracts at certain prices, a process known as placing limit orders*. If market prices reach these levels, then his orders are executed at the chosen prices. Mr. Brunner also liquidates his futures positions in advance of the contract month's expiration, which occurs on last trading day. Holding contracts to expiration would obligate him to deliver cheese, so by getting out of the market early, Mr. Brunner uses the futures market solely as a financial transaction.

"I glean what I can from industry sources to make my market outlook. I subscribe to *Dairy Profit Weekly*, receive information from my broker, and study feed prices, weather reports and cheese inventory levels," Mr. Brunner said. "Then, since I know my

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***Limit Order**: Order given to a broker specifying a certain maximum (or minimum) price, beyond which the order is not to be executed.

Brad Brunner
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operation's cost of production, I can lock in a price above that level if I think milk prices are going to fall."

Mr. Brunner became interested in the dairy futures markets after attending a Farm Credit Services seminar in April 1994. He quickly opened an account and sold July 1994 Cheddar contracts. Since then, he has locked in his milk production's price six times, for a total of six production months hedged.

As a former grain merchandiser for Cargill Inc., Mr. Brunner already understood the concepts of hedging in a futures market. While working in the grain markets, Mr. Brunner saw new opportunities arise in the dairy industry and the chance to control his own destiny, returning to Wisconsin to run the family dairy operation. And, with his experience in grain futures, Mr. Brunner quickly became comfortable using the Cheddar futures market.

"If you assume a milk price of $11.42/cwt., and it drops a dollar, you've lost over 8 percent of your monthly income," Mr. Brunner said. "With profit margins at around 5 percent, there just isn't room for a dairying operation to take that kind of risk. With these slim margins, we need to transfer price risk through the futures market."

Mr. Brunner stresses the importance of good cash flow management, so a producer can meet margin calls out of operating cash flow. Margin is marked to the market value every day and milk checks lag price changes by two months. Allowing a producer to control a contract, margin is a "good faith deposit," usually a percentage of a contract's market value. If prices move in an unfavorable direction, the producer may have to post additional margin to maintain the correct percentage deposit. These funds are returned after the futures position is liquidated, and, in some cases, earn interest.

"I don't mind margin calls, because I am going to sell the physical milk anyway, "Mr. Brunner said. "If prices move against me in the futures market, I will make it up on my milk to get the locked in price."

Mr. Brunner expects cooperatives to play a larger role in the futures market in coming months, not only by offering fixed-price forward contracting programs, but also by hedging the value of their cheese inventories.

"If the co-op has a major swing in cheese inventory value, we blame it on the cheese price," he said. "But someday, producers will not accept that answer anymore, not with the co-op able to lock in inventory value through the futures market. It may take a while to become comfortable with the concepts, but it's about time the industry uses dairy futures. In fact, it's long overdue."

Effective October 7, 1995
the CSCE will have new telephone and fax numbers, but our toll-free number (1-800 HEDGE IT) and address will not change.

New CSCE Telephone
(212) 742-6100

New CSCE Fax
(212) 748-4321

MARCH 29, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Alto Opens Forward Milk Pricing Program to All Patrons

Alto Dairy has broadened the scope of its pioneering program to offer dairy farmers fixed price forward contracts for their milk. Alto began the year-long pilot program in July, 1994. Initially, enrollment was limited to Alto patrons who signed up before the program's inception. Now, any Alto patron may enroll.

"The program was well received by initial participants, and the balance of our membership wanted the opportunity to participate," said Alto Dairy President Larry Lemmenes. "We had eighteen new applications from our patrons on the first day we expanded enrollment."

Alto's fixed price forward contracting program allows Alto patrons to lock in a price for the base pay portion of a future month's milk production. Program participants have a simple objective: protecting the value of their milk against drops in the cash market price.

By locking in a milk price, the farmer knows in advance how much a future month's forward contracted milk production will be worth. This guaranteed monthly income helps with farm budgeting, particularly for farmers with debt payments.

The Producer

To do so, a participating Alto producer telephones Alto Dairy between Monday and Friday, 8 AM to 12 PM, and requests "forward milk bid prices." The forward milk bid prices will be for one or more upcoming month's milk production, and are based on the previous day's settlement prices in the CSCE Cheddar cheese futures market.

Farmers who decide the day's bid price is attractive request "a forward milk contract" with Alto at that price for a specific amount of milk production. Each forward contract has a minimum quantity of 10,000 pounds of milk. Participants may contract additional milk production over the minimum in 5,000 pound increments, up to a maximum of 50% of the farm's monthly milk production.

Over the period of the contract, the farmer receives the agreed upon price, regardless of the market price. Quality and incentive premiums, such as butterfat, protein and volume, are unaffected by the contracting program.

Alto's Role

At the time Alto agrees to buy the forward milk contract, Alto sells Cheddar cheese futures contracts to

(continued)

Nonfat Dry Milk Differentials Reduced

The CSCE received Commodity Futures Trading Commission (CFTC) approval to reduce nonfat dry milk (NDM) delivery locational price differentials. On February 21, effective with the September 1995 contract, the new differentials are 0.5 cents/lb. for the Central Region and 1.5 cents/lb. for the Eastern Region, reduced from the original levels of 3.50 cents/lb. and 5.00 cents/lb., respectively.

The price differentials are premiums added to the settlement price of the NDM futures contract to reflect the typical cash market price difference for delivering NDM in the Western, Central and Eastern Regions. The new price differentials more accurately reflect cash market conditions and make the market more useful to a wider range of participants.

In addition, when the final settlement price for a NDM futures contract is below the Commodity Credit Corporation (CCC) support purchase price, the differentials will be decreased by the equivalent amount. However, a differential could never be less than zero.

For example, if the futures contract expires with a price of 103.00 cents/lb. and the support price is 103.40 cents/lb., then the differentials would be

(continued)

Forward Milk Pricing
(continued)

hedge the forward contracted milk price. As contracted milk is delivered, price exposure diminishes and Alto liquidates the futures positions by buying back the Cheddar contracts it sold.

In announcing the program's expansion, Alto also reported that, since the pilot's inception, 22 patrons had written a total of 108 contracts, representing 3.475 million pounds of milk. "Dairy farmers have no ability to predict what the actual cash price might be in the future — that depends on market supply and demand," said Mr. Lemmenes. "The patron's objective is to secure the cost of production and an acceptable profit margin. If that's important to them, then here's a way to do it."

Of course, participating farmers can lock in prices that turn out to be lower than actual market prices during the contract period — something several initial program participants have experienced. But, Mr. Lemmenes said, those farmers apparently believe the benefits of a known price outweigh the lost opportunity for higher prices.

"An agricultural newspaper interviewed a program participant, and asked him about locking in a price lower than the prevailing cash price at delivery," said Mr. Lemmenes. "The producer said he wasn't concerned about the difference in prices because his objective was to secure a profit in his business, an objective which he had achieved."

The Way of the Future

Fixed price forward contracting, although used for decades in other agricultural industries, is a new concept for the dairy industry. According to Mr. Lemmenes, interest in the program extends beyond Alto's own patrons. In fact, other dairy co-op managers have been calling him or pulling him aside at dairy industry functions to ask about the program.

"One of the concerns they have is that handling the program may be burdensome," said Mr. Lemmenes. "Sure, there's some time and some work involved, but we haven't had to add staff to handle our program."

Mr. Lemmenes expects to see more producers looking at forward contracting as a viable marketing mechanism. "I sense that futures market activity will pick up as a number of dairy organizations start putting milk forward pricing programs in place," he added.

NDM Differentials
(continued)

+0.1 cents/lb. for the Central Region and +1.1 cents/lb. for the Eastern Region. If you have questions or would like to receive updated contract specification cards, please contact the CSCE Marketing Department at (212) 938-2829.

FEBRUARY 15, 1995

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Interview with Jerry Bos of Mid-America Dairymen, Inc.

Jerry Bos is the Chief Financial Officer of Mid-America Dairymen, Inc., one of the largest dairy cooperatives in the United States. Since the introduction of dairy futures and options in 1993, Mid-Am has utilized both the Cheddar cheese and nonfat dry milk markets at the Coffee, Sugar & Cocoa Exchange, Inc. (CSCE). Mr. Bos spoke with On the Dairy Markets *about Mid-Am's experiences in these markets.*

—William Whitmoyer
CSCE Financial Writer

Q: Why did Mid-Am decide to hedge price movement risk with futures and options?

A: We got involved in futures because, first and foremost, we have a lot of cheese. We carry up to 30 million pounds of cheese inventory at any one time. And so, even a penny swing in the cheese price is a $300,000 move for us. If the market has a big swing, we can have quite a few dollars of inventory value at risk.

Overall, we have about 20 million pounds of cheese that is subject to the whims of the market, in other words, based on the market price at the date of sale. Our sales effort accounts for the other 10 million pounds, which is either sold at the date of make or under contract. When the Cheddar futures market came along, it obviously was a place to shift some of the risk of inventory price change by hedging our cheese inventory.

Q: After your experiences in the futures markets, do you consider your risk management program a success?

A: If you define success as the ability to use the market as planned, then we have been successful. When we use futures to lay off a million pounds of inventory risk, the market always works and helps us. But trading in the dairy futures markets is thin, and it's hard for us to do all the hedging we would like.

Outside of some difficulty getting in and out of the market with our large positions, we are pleased with the market. Especially the growth rate. Overall, it's a nice uptrending growth line.

Q: Others have mentioned light trading as a reason to avoid the markets. How do you deal with light trading in the dairy futures markets?

A: We are interested in working with this small market as we feel we can help grow it. As the market grows, it will become a more useful tool for everyone. And the only way to grow the market is to get in and get your feet wet. We have tried to participate as much as possible.

When using these markets, you have to understand that trading is thin so you don't get yourself in a difficult position. And for Mid-Am, we have the cheese, so we can always deliver it if necessary.

In general, I have found that entering into contracts is easier than unwinding the trade, so you need to plan ahead and liquidate the position a little earlier. If you know it may be tough to liquidate due to the thinness of the market, then you should have a cautious attitude.

Q: How do you decide what trades to make and when?

A: Although this may not be the most sophisticated method, we have a Friday morning meeting with our cheese, nonfat and butter operations people. At this meeting, we review our inventory positions — mostly we talk about inventory levels and price

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trends. Depending on the information that comes out of that meeting, I decide what our hedging strategy should be in the futures market. Basically, we determine what exposure to risk exists, and try to lock in good prices for a portion of our inventory.

Q: What about risk in the futures market?

A: The level of risk depends on whether you are hedging or speculating. We are hedging as we have inventory and are selling contracts in the futures market, so that's not very risky. In fact, all of our futures business is risk reducing.

Q: What do you tell your patrons and Board of Directors when they ask if using the futures market is valuable?

A: Hedging reduces inventory risk, which — obviously — is good for both the co-op and the patron.

Q: What do you say to those who think that hedging is too complicated?

A: I've been dealing with futures contracts for a long time. Back when I was in the accounting business, I took a futures course so I could audit my grain clients better. That's one way to get a nice easy background in futures — go to your local university and take a futures course.

Another way to learn about futures is to get a broker that you feel comfortable with and trade a few contracts. You may not learn too much about the market when you're not involved. But if you have money in it, you will want to understand how your money is working for you.

And, to me, the easiest way to get started is by trading one or two contracts. Don't jump in and trade 100 contracts. If you jump in and trade one or two contracts, you will become comfortable with the market. I think we tend to make this whole process too complicated. Just doing a plain vanilla futures contract is pretty simple.

Q: What do you see in the future for the dairy futures and options markets?

A: It's a good tool we need to have. I think we will see more consolidation in the dairy industry — fewer companies are going to have larger inventories. And I don't see why we would have less volatility in the market than we do now, perhaps we will have even more. So a way to lay that inventory risk off will become more and more necessary.

Also, I think that along with consolidation, there is a greater need for capital. If you have a well-hedged inventory program, your banker will allow you to operate on less capital.

You know, a well-hedged inventory is better than just being out there blowing in the breeze. Hedging, plain and simple, is a necessary tool for the dairy industry of tomorrow.

DECEMBER 20, 1994

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Interview with Mike Downes of Rosenthal Collins

Last month, On the Dairy Markets *took a look at the recent move by cooperatives to offer forward contracting programs to their patrons. This month, we spoke to Michael J. Downes about the potential for farmers to hedge milk price risk directly, on their own.*

A Senior Account Executive with Rosenthal Collins in Chicago, Illinois, Mr. Downes is an active participant in the dairy futures markets. In addition to his career as a commodities broker, he also is a dairy farmer milking 250 cows on a 600 acre farm near Eau Claire, Wisconsin.

Mr. Downes is actively working with other dairy farmers and related dairy industries to promote a greater understanding of the futures markets. On the Dairy Markets *spoke with Mr. Downes about his view of the dairy futures markets.*

—William Whitmoyer, CSCE Financial Writer

Q: How does a farmer use the futures market directly?

A: When farmers understand their cheese price-to-milk price relationship and know their cost of production, then hedging in the futures market is a pretty easy decision. For instance, on my farm, a $1.25 cheese price is equal to $12.50 in my mailbox. So, if I want to lock in prices on 105,000 lbs. of milk at $12.50, I need to sell one contract of $1.25 Cheddar cheese futures. I use one contract because of the 10-to-1 production relationship between milk and cheese, and each Cheddar contract calls for 10,500 lbs. of cheese. Farmers understand that when the cheese price drops from $1.30 to $1.20, it affects their pocketbook. Hedging allows them to deal with that.

Q: Do you use hedging on your own farm, and has it met your objectives?

A: Yes. We use both futures and options to manage price volatility on our farm. We have sold several contracts over the past year at prices that are better than what we think the cash market price will be at delivery. Our objective is to lock in milk prices, better manage the risk in our operation and improve our bottom line. And to date, we certainly have met those objectives.

Q: What are the benefits?

A: Now farmers can make a marketing decision by determining a milk price they can live with and entering a futures order for that price, protecting the value of their farm's production. As a farmer, I see firsthand the risks we face. There is a certain piece of mind I have from knowing my milk prices for 1995, and my banker appreciates the more reliable cash flow projections that hedging makes possible. There is no question in my mind that the dairy markets will become more risky and volatile as support prices continue to drop, and using the futures markets to lock in prices will help farm productivity.

Q: How do dairy farmers respond to the concept of hedging?

A: On the concept of futures, most farmers are initially skeptical. But that is only because it is a new concept for many of them.

Q: How do you deal with this skepticism?

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A: When I speak to dairy farmers, I start by asking them to look at their own dairy farms, and think of it like a business. Then, I ask the farmers if they can think of another business that has no idea what the selling price is for their finished products. The farmers agree with me that the dairy farm is one of the few places where people go to work seven days a week, work hard and then, a month later, find out the price received. I have given speeches all over the country, and I have found that the concept of hedging is easily understood. We have opened several good dairy farm accounts. And these are not only the 500 to 1,000 cow operators, but also the 80 to 120 outfits. The small- and medium-sized farms really seem to understand the risk they face in the market, and they want to utilize hedging to manage that risk.

Q: What do you say to people who think using the futures market is too risky?

A: Speculating, which is attempting to predict future price levels, is risky, but hedging is just the opposite of speculating. Hedging actually lowers risk by locking in future price levels. Farmers who hedge milk prices in the futures market subject their milk production to less risk than if they never used the futures market at all. The unhedged farmers are attempting to predict the future price level of the cash milk market, which is accepting a higher risk level than the farmers who lock in a future price.

Q: How do you see the dairy futures and options markets fitting into the dairy industry of tomorrow?

A: I think that dairy farmers owe it to themselves to get involved and learn about the futures market. It would be nice to have the co-ops and cheese plants offer forward contracts, using the futures market to lock in prices. I should be able to call my co-op and get an immediate quote on future milk production — there should be a price every day. But farmers don't have to wait for their co-op. Now that's not saying that the co-ops don't need to go through the educational process to understand how forward contracting benefits both co-op and farmer. Overall, I really think the individual farmers are going to drive the market by either trading on their own or encouraging their co-op to give them a forward contracting service.

Q: To sum up, what advice can you give to people in the dairy industry?

A: Approach the futures market with an open mind. I get frustrated when people do not take the time to learn about the markets. Simply put, using futures can help your bottom line — whether you are a farmer, a co-op or a cheese plant. Hedging is a tool to lock in price, lower risk and give you an edge in the dairy industry. And for dairy industry firms all that's needed is for someone on the management team to learn about the market, and then present their findings to the whole organization. In order to survive in the dairy industry in the next century, everyone will need to use the hedging tools offered by the futures market.

NOVEMBER 28, 1994

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

Interview with Roger Blimling of Blimling & Associates

In July of 1994, Alto Dairy of Waupun, Wisconsin, launched a program providing fixed-price forward contracts for patrons' milk — the first program of its kind in the dairy industry. Alto's venture was developed by and has been guided by Roger W. Blimling, a commodity merchandising expert and futures broker located in Cottage Grove, WI, a town outside of Madison.

Beyond his work with Alto Dairy, Mr. Blimling has travelled extensively to cultivate accounts from other prominent dairy industry firms. Of late, he has been a featured speaker at forums devoted to the CSCE's dairy contracts.

On the Dairy Markets *recently spoke with Mr. Blimling to gain his insights on the potential value of dairy futures and options for dairy farmers and their cooperatives.*

William Whitmoyer, CSCE Financial Writer

Q: What are forward pricing programs and how do they work for dairy farmers?

A: A forward pricing program allows the dairy farmers to secure the value of their milk production months in advance. The programs are administered by cooperatives and proprietary firms. They offer their suppliers a fixed price for a certain quantity of milk over a given period of time. The co-op or plant then uses the Cheddar cheese futures and options market to hedge the risks associated with offering fixed prices. The ability to participate in these programs gives farmers a tremendous, tangible benefit: they know how much they will receive for at least a portion of their milk regardless of fluctuations in market prices. That ability has not been previously available.

Q: Doesn't the government support milk prices?

A: Years ago, the government supported the milk prices at parity. But today, they use a support price system, which has dropped from $14 down to around $10. So, today's government support price level is below the profitability level for many milk producers.

Q: Can't farmers hedge on their own? Why do you think fixed price programs might make more sense?

A: Certainly, the dairy farmer can use the futures market individually through a broker. But some producers prefer not to use futures directly, and having a futures account requires some management time and capital. A fixed price contract offered by a co-op relieves the individual farmer from the day-to-day management of the hedging account. And the fact that co-ops pool the milk of several farmers gives them more strategic flexibility and other economies-of-scale. Of course, another option is for the dairy farmer to price one portion of their milk production through a cooperative-sponsored forward contract and a second portion individually.

Q: In your experience with Alto Dairy, how does the cooperative benefit from the program and what do the farmers think about forward contracts?

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A: The cooperative is strengthened through patron loyalty, with the costs of the program born by the users of the program. The dairy farmers, overwhelmingly, wanted this type of opportunity. And, for Alto, the program was another way to provide price stability for its members, a goal which is outlined in Alto's mission statement. Remember, most cooperatives exist to provide a service to the owners — the members — of the cooperative, and that's just what Alto is doing now. Today, dairy farmers can have the same marketing opportunity as their counterparts in other industries.

Q: How do other industries use forward contracting?

A: Look at the corn market. A large percentage of corn production is sold on fixed price forward contracts, priced for delivery at harvest. For example, this past year, the cash price of corn exceeded $2.50 a bushel during the summer in many parts of the country. By harvest time, the price of corn was $2 a bushel or less. If the corn farmers had not had the opportunity to hedge or use forward contracting, they would not have been able to sell those bushels of corn in advance of delivery at $2.50. They would have been forced to take the lower cash price at harvest time.

Q: What is the difference between hedging and speculating?

A: Hedging and speculating are two separate and distinct ways to use the futures markets. In fact, they are just the opposite. Hedging is a management tool which locks in a milk price, thereby eliminating exposure to price volatility. Speculating is an attempt to profit from price swings in the market. Because there has never been this kind of opportunity for the dairy farmer, some people are hesitant to use the futures market because they have heard of someone who traded futures and lost money. The people who lost money were speculating.

Q: What is your view on the potential for these markets?

A: I am optimistic about the Cheddar cheese and nonfat dry milk futures contracts because there is a fundamentally-sound economic need for them. Dairy farmers have no other way to protect themselves from price swings. They have to take the price offered at delivery, and the end user also must pay the offered price for the product. Both benefit from price stability. I see the dairy futures market growing and I think it will flourish in the future. Right now, there needs to be more activity in the market, which will come as more people learn about hedging and the use of forward contracting.

Q: Why did you get involved in the early stages of the dairy futures markets?

A: Many of my dairy clients also are grain producers. When I initially looked at the dairy futures market, I saw an opportunity for the dairy farmer to gain some control over their income stream. Then I saw that the dairy futures market honestly tracks the cash milk markets. I know that hedging systems work because I use them in other industries daily and I believe producers will use forward contracting once they understand how it can work for them.

Q: Any advice for dairy farmers interested in forward contracts?

A: Yes. Ask your milk buyer to start a forward contracting program. Some dairy producers who also produce grain already use this type of program and know the benefits. The dairy farmer who hasn't used it will need to study it a bit. But when I give an example by saying, "Here is what you can get for a hundredweight of milk in February, or this is what a buyer will pay you in November for your milk, no matter what happens to the Cheddar cheese market or futures market," the farmer will understand the benefits of the forward contract.

DAIRY NEWSLETTER OF THE COFFEE, SUGAR & COCOA EXCHANGE, INC.

ON THE DAIRY MARKETS

CSCE to Begin Trading Butter Contracts on October 15

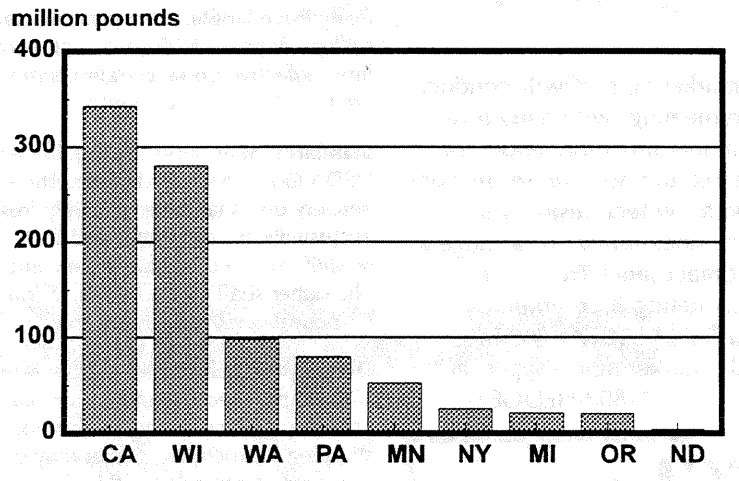
On October 15, the Coffee, Sugar & Cocoa Exchange, Inc. (CSCE) will introduce trading in Butter futures, with trading in Butter options commencing on October 22.

Butter futures and options are a natural extension of the Exchange's existing dairy products line and will further the Exchange's continuing efforts to provide the widest possible spectrum of price risk management tools to the dairy industry. Since the decline in government support prices for dairy products in the late 1980s, the dairy industry has been exposed to increasing levels of price risk. In fact, the 1996 Farm Bill calls for the elimination of price supports for dairy products, including butter, at the end of 1999.

CSCE Butter Futures

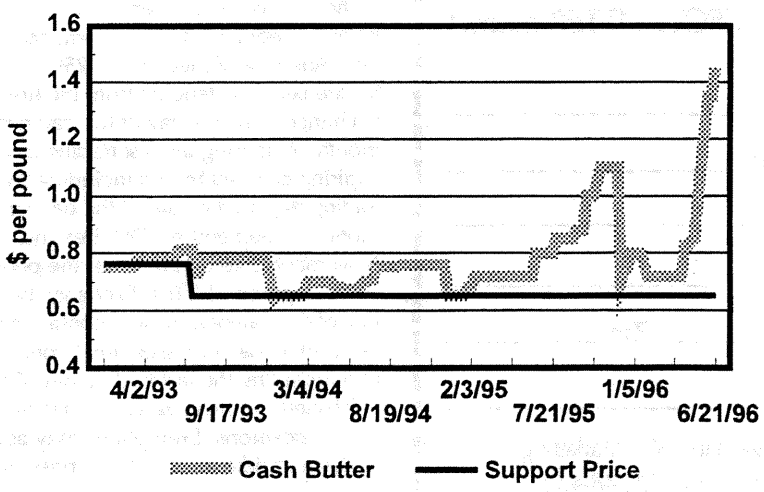
The CSCE Butter futures contract was developed with the guidance of dairy industry participants, and formulated in accordance with existing cash market practices. The delivery size is one truckload of butter (40,000 pounds), with the contract size based on 10,000 pounds. The smaller contract size will afford all segments of the dairy industry involved in buying or selling butter the opportunity to use the markets. The contract will trade from 9:00 AM to 2:00 PM New York time, and calls for FOB delivery of USDA Grade AA "fresh" or "storage" salted butter at any point within the continental United States. In addition, there are no price differentials on delivery locations, and

U.S. Butter Production By State - 1995



Total U.S. Butter Production-1995: 1,260,736,000
Source: NASS/USDA

Weekly Cash Butter vs. Support Prices



Source: Dairy Market News

delivery can take place from any USDA approved plant or warehouse in the U.S.A.

Marketing and Educational Efforts

The Exchange has developed educational literature on the new Butter contract, including a product brochure with hedging examples. Daily butter market prices will be listed on the CSCE's Home Page at http://www.csce.com, as well as on the Exchange's free Daily Dairy Market Fax Report.

To foster liquidity in the new market, the CSCE will add the Butter futures and options markets to the Exchange's existing Dairy Permit Program and Registered Market Maker Program. To assist interested parties with selecting a broker, the CSCE has developed a Dairy Broker Directory which lists those brokers who conduct dairy business.

Exchange marketing staff will conduct one-on-one meetings with dairy firms interested in learning more about the Butter contract and how futures markets can be used to protect businesses against price uncertainty. To arrange a meeting, contact Janet Troy, vice president/marketing & communications, at (212) 742-6107, or Kevin McCormick, marketing manager, at (212) 742-6103 or 1-800-HEDGE IT.

YES!

I would like more information on the CSCE BUTTER market

Name_____

Address_____

_____

City_____

State_____ Zip_____

Phone_____

Fax coupon to CSCE Marketing Department • (212) 748-4321

Butter Contract Specifications

Futures

Calls for FOB delivery of USDA Grade AA "fresh" or "storage" salted butter at any point within the continental U.S.A.

Trading Unit: 10,000 lbs.

Delivery Unit: 40,000 lbs.

Trading Hours: 9:00AM - 2:00PM New York Time

Delivery Months: Current calendar month, next two months and each Feb, Apr, Jun, Aug, Oct, Dec occuring in the ensuing 12 months

Ticker Symbol: BW

Price Quotation: Cents/lb.

Minimum Fluctuation: 10/100 cent/lb., equivalent to $10.00 per contract.

Daily Price Limits: From previous day's settlement price. 6.00 cents with variable limits effective under certain conditions; no limits on two nearby months.

Standards: Shall meet the requirements of USDA Grade AA salted butter. The entire delivery unit shall be exclusively fresh or exclusively storage butter and shall be uniform in color, salt content and weight. The butter shall be packed in 25 kilogram or 68 pound corrugated containers.

Delivery: Shipped by seller from seller's USDA-approved manufacturing plant or cold storage facility according to buyer's shipping instructions. Butter may be delivered at any point within the continental U.S.A.

Position Limits: 1,000 contracts net on the same side of the market in any one month. In the case of the delivery months of January, February, March, April, May, June, July, August and December, 250 contracts for the period extending from the first Exchange business day of the calendar month containing the last trading day of the expiring contract to and including the last trading day. In the case of the delivery months of September, October and November, 200 contracts for the period extending from the first Exchange business day of the calendar month containing the last trading day of the expiring contract to and including the last trading day. Combine published "futures equivalent" ratios of option positions. Exemptions may apply for hedge, straddle and arbitrage positions.

Options

Confers to buyer the right to buy (in the case of a call) or sell (in the case of a put) one butter futures contract.

Trading Unit: One butter futures contract

Trading Hours: 9:00 AM until the completion of the closing period which shall commence at 2:00 PM.

Price Quotation: Cents/lb.

Delivery Months: Current calendar month, next two months and each Feb, Apr, Jun, Aug, Oct, Dec occuring in the ensuing 12 months

Ticker Symbol: BW

Minimum Fluctuation: 1/100 cent/lb., equivalent to $1.00 per contract

Futures Contract Price	*Strike Price Increments*
Less than $1.00	$.025
$1.00 up to $2.00	$.05
$2.00 or more	$.10

Expiration Date/Time: 9:00 PM New York Time on the last trading day. Notification of intention to exercise must be made by an options holder to a carrying member firm by 4:00 PM on such day.

Last Trading Day: First Friday of the contract month.

Position Limits: 1,000 contracts net on the same side of the market in any one month. In the case of the delivery months of January, February, March, April, May, June, July, August and December, 250 contracts for the period extending from the first Exchange business day of the calendar month containing the last trading day of the expiring contract to and including the last trading day. In the case of the delivery months of September, October and November, 200 contracts for the period entending from the first Exchange business day of the calendar month containing the last trading day of the expiring contract to and including the last trading day. Combine published "futures equivalent" ratios of option positions. Exemptions may apply for hedge, straddle and arbitrage positions.

Contract specifications are current as of September 9, 1996.

Governor's Task Force on Cheese Pricing

File

Report To Governor Tommy G. Thompson

January 1, 1997