

POTATO FUTURES AS A MANAGEMENT TOOL

by

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Good afternoon gentlemen! It is a pleasure to have this opportunity to speak with you concerning the current potato situation as well as the attractiveness of using futures as a financial tool in your growing/packing/processing operations. The timing of this gathering is particularly opportune, coming shortly after the institution of a new western russet contract on the Chicago Mercantile Exchange. The broadening of this contract to include major russet areas from previously narrower versions should generate increased trade enthusiasm throughout western growing areas. We, at Merrill Lynch are extremely enthusiastic about its viability and have been encouraged by trade inquiry above our expectations.

The scope of this presentation will include a brief discussion on the contract, appropriate examples of stylized hedges for trade participants and a general overview of the potato situation, both domestically and on the export scene.

The most obvious question to ask then, "Is what is a futures contract"? Simply, it is a legally binding agreement to accept or make delivery of a specified quantity of a commodity during some designated month in the future. In the case of the russet contract: 80,000 pounds, U.S. Number 1, Size A, straight run. Par delivery unit shall be one-half in master containers composed of 10 pound mesh bags and one-half in 50 pound new cartons. At seller option, the entire delivery may be packed in new, 100 pound burlap bags, at a discount of \$2.50 per cwt. Par delivery point is Pocatello, Idaho. Delivery by rail is F.O.B. Pocatello, but it may be made with a 75¢ per cwt. allowance from other points as Pasco and Othello, Washington, Klamath Falls and Hinkle, Oregon. Deliveries can also be made by truck, F.O.B. point of origin with similar par point and allowance. The major variable, price, represents the collective judgment of all buyers and sellers and is expressed daily on the trading floor.

Since futures and cash prices are effected by the same forces, supply/demand being the most dominant, futures tend to parallel cash prices over comparatively long periods of time. Short term price comparisons from day-to-day or week-to-week occasionally can reveal divergent patterns, but such observations do not detract from the essentially similar movement over the long term. This fact is the explanation for the ultimately close relationship of cash at points of delivery and futures.

Despite the fact that futures are binding contracts to make or take delivery, it is not mandatory for a hedger to fulfill his contract in that manner. Unlike cash dealings, where the primary intention is either to dispose of or acquire a commodity, futures should be viewed as a temporary forward pricing medium. Cash contract cannot be readily changed in light of fresh market developments no matter how carefully they have been negotiated. Though based upon the best judgment of price terms at the time of signing, alteration may not be readily accomplished except under unusual circumstances and then probably through costly legal and arbitration procedures. Futures contracts liquidated by offset introduce a great measure of flexibility to an otherwise rigid confinement of solely cash transactions. In summary the major function of futures are:

1. Provide protection from adverse price fluctuations;
2. A management tool to provide flexibility in buying and selling strategies and aid in forward planning;

3. Free working capital;
4. Reduce storage costs; and
5. Add to borrowing capacity of producers.

Futures, while offering an alternative pricing mechanism should not replace normal cash market dealings. Potato grower, packers and shippers should continue to sell their cash item to customers through normal marketing channels, although making or taking delivery is a possibility. The decision to proceed with physical deliveries depends upon individual economic considerations favoring such action.

"The Basis"

Once it has been determined that a price risk does exist, the major attention of the hedger should then turn to the BASIS. A simple definition of the "Basis" is the difference between futures price and a prevailing local cash price. Since hedgers usually take futures positions opposite to that in the cash market, the basis or more importantly the movement thereof will be the primary determinant of profit or loss in the hedging operation. Thus during the season, this basis can remain constant or more probably increase or decline. It is therefore incumbent upon the hedger to make a careful assessment of the basis for a future point in time and then review the current basis relationship as to the attractiveness of a hedge. The simplest method of constructing seasonal basis relationships is to gather past prices for local cash markets and corresponding futures prices. A comparison of both via a "basis chart" which one can construct himself, will aid in determining the timing of a hedge. (Due to recent inception of trading of the russet contract, this will take some time before any historical relationships can be made.) An alternative then would be to make an actual cost estimate. Thus, in addition to local cash, one must add freight, interest and insurance costs. Moreover, should cash be stored for delivery several months away storage charges must also be added. Therefore, if one determined that the normal basis was 60¢ per cwt., he would have to add three months storage charges to arrive at an appropriate basis for May delivery. In summary, over a period of several seasons, a basis pattern which is repetitive will most likely evolve. An alert hedger can take advantage of extremes to place an appropriate position in the futures market to "lock in" this basis advantage. As the delivery time of the contract approaches, cash and futures tend to converge with a corresponding narrowing of the basis towards zero. This is termed convergence. Any distortion in this relationship late in the delivery time of the contract can be rectified by the trade in the making or taking of delivery. This is the exception and not the rule.

Trade participants can use futures for both buy and sell hedges. We would like to present appropriate, simplistic examples for your consideration.

A. Shipper - Insurance against Uncommitted Inventory

After the completion of the fall harvest and storage a shipper in December purchases 80,000 pounds of russets from a grower. After grading, packing and inclusion of storage costs through May, the shipper determines that he can make a reasonable profit at \$7.00 per cwt. He does not expect to sell the cash item until May. To protect the value of his long inventory position, he would sell May futures against it, thereby locking in a price and a basis of 75 points. When he finally sold the cash item in May to a processor, he was still able to net out his original goal of \$7.00 via combination of cash and futures transactions. This was facilitated by the basis having remained constant at 75 points.

B. Producer - Lock In Production Costs

After completion of planting, a grower is concerned that supplies will be ample come harvest and he may have difficulty in recovering his costs. While he may not have a good feel

for prices at harvest time, he does come to the conclusion that cash will probably sell for \$1.00 per cwt. below November futures. Thus, he would sell November futures in May at \$8.00. Again, when he harvested his crop and sold it at the beginning of November, the combination of cash and futures allowed for a satisfactory return as the basis did not change. Thus his careful assessment of the basis paid off in a net return much above that he could have realized by merely selling his crop at harvest. Even if prices had risen, the grower would have still netted out \$7.00 per cwt. and accomplished his main objective of removing the risk of a price decline from his shoulders.

Thus far, we have presented examples of hedges where no change in the basis occurred in the need for price protection. From one season to the next, the hedger could, during the time of the hedge, experience a change in the basis. A seller of futures is interested in a constant basis primarily and if possible a decline in the relationship.

A.

SHIPPER

CASH MARKET		FUTURES MARKET		BASIS
December 10				
Anticipated sale price*	\$7.00/cwt.	Sold May potatoes @	\$7.75/cwt.	\$.75
May 1				
Shipped potatoes @	\$5.75/cwt.	Bought (offset) potatoes @	\$6.50/cwt.	\$.75
Profit from futures	+1.25/cwt.	Profit from futures	\$1.25/cwt.	
REALIZED PRICE	\$7.00/cwt.			
*Based on May futures				

B.

PRODUCER

CASH MARKET		FUTURES MARKET		BASIS
May 25				
Anticipated sale price*	\$7.00/cwt.	Sold November potatoes @	\$8.00/cwt.	\$1.00
November 1				
Sold potatoes @	\$5.00/cwt.	Bought (offset) potatoes @	\$6.00/cwt.	\$1.00
Profit from futures	+2.00/cwt.	Profit from futures	\$2.00/cwt.	
REALIZED PRICE	\$7.00/cwt.			
*Bases on November futures				

C. Grower - Narrowing Basis

In the current example, the grower sold November futures after planting his crop and selecting an advantageous basis of 1.50 per cwt. Thus he would be satisfied with a cash price for his crop come November, at \$6.70 per cwt. However, when it came time for him to sell his crop after harvesting, he found to his pleasant surprise that the basis had worked in his favor for an additional 20¢ per cwt.

D. Grower - Widening Basis

In this example, the need for price protection was reduced somewhat by an unfavorable change in the basis, in this case a widening when the grower came to sell his crop after harvest. The grower had estimated an attractive basis of \$1.50 per cwt. when he decided to hedge in June and lock in a price. However, in the interim, a change in the supply/demand situation developed which resulted in a widening of the basis by 50¢ per cwt. Instead of achieving his goal of price protection of \$4.70 per cwt., net after futures, and cash transaction, he only realized \$4.20 due to the unfavorable basis change. The example also helps to illustrate the need for constant monitoring of a hedge and where necessary action may be needed to lift the hedge prematurely where unexpected events may occur. The hedge may then be reinstated when and if the threat of price risk should return.

Thus far, we have presented examples of hedges for those situations where price risk against inventory or unsold crops were at stake. Users, i.e., processors, chippers and in certain cases shippers can be vulnerable to price risk. In this case it is on the upside and would involve unexpected cost increases in raw materials which might create havoc with planned margins on sales. The basis comes into play in the reverse manner in that the buy hedger would prefer a constant to rising basis.

C.

GROWER - NARROWING BASIS

CASH MARKET		FUTURES MARKET		BASIS
June 1				
Anticipated sale price*	\$6.70/cwt.	Sold November potatoes @	\$8.20/cwt.	\$1.50
November 1				
Sold potatoes @	\$4.95/cwt.	Bought (offset) potatoes @	\$6.25/cwt.	\$1.30
Profit from futures	+1.95/cwt.	Profit from futures	\$1.95/cwt.	
REALIZE PRICE	\$6.90/cwt.			
*Based on November futures				

D

GROWER - WIDENING BASIS

CASH MARKET		FUTURES MARKET		BASIS
June 1				
Anticipated sale price*	\$4.70/cwt.	Sold November potatoes @	\$6.20/cwt.	\$1.50
November 1				
Sold potatoes @	\$6.50/cwt.	Bought (offset) potatoes @	\$8.50/cwt.	\$2.00
Loss from futures	-2.30/cwt.	Loss from futures	\$2.30/cwt.	
REALIZED PRICE	\$4.20/cwt.			
*Based on November futures				

E. Processor - Widening Basis

In this example, the processor is going long May futures in January. His analyses of the situation tells him that this could be the going price for May delivery when he will need the cash item. Moreover, his own cost analysis indicates that this price will permit him to achieve his planned operating margins. Come May, conditions in the supply/demand balance had been altered to the extent that prices had risen appreciably above his earlier projections. However, he was able to net out at least his desired cost of \$6.00 per cwt. when he purchased his cash and offset the buy hedge. Specifically, an additional benefit of 25% per cwt. accrued due to a favorable change in the basis. Thus, his net costs were \$5.75 per cwt., and this probably put him at a decided advantage versus competition.

F. Processor - Narrowing Basis

Our last hedge, example, involve the same processor under similar conditions of price risk at the beginning of January. The buy hedge was put on with the same analysis of expected prices in May and the acceptance of a 50¢ basis as not being overly large. When May arrived, prices had risen but cash had rallied more than futures to the extent that the basis narrowed in to 25¢. The main objective of price protection, however, was met despite having to pay a price higher than forecast due to the basis change. It was a small penalty to pay versus not having had any price protection at all and been forced to pay the going rate of \$8.20. This certainly would have wrought havoc with margins on processed products and even resulted in a loss.

In summary, we have attempted to illustrate via simplistic examples how hedging can be used to guarantee a price when a price risk is recognized. We must emphasize this concept of price guarantee. Hedging itself must not be viewed as guaranteeing a profit. The profitability of the overall hedging operation should be viewed in the context of the hedgers ability to properly recognize price risk prior to taking any action in futures.

E.

PROCESSOR - WIDENING BASIS

CASH MARKET		FUTURES MARKET		BASIS
January 5				
Anticipated purchase price*	\$6.00/cwt.	Bought May potatoes @	\$6.50/cwt.	\$.50
May 1				
Bought potatoes @	\$8.05/cwt.	Sold (offset) potatoes @	\$8.80/cwt.	\$.75
Profit from futures	-2.30/cwt.	Profit from futures	\$2.30/cwt.	
REALIZED PRICE	\$5.75/cwt.			
*Based on May futures				

F.

PROCESSOR - NARROWING BASIS

CASH MARKET		FUTURES MARKET		BASIS
January 5				
Anticipated purchase price*	\$6.00/cwt.	Bought May potatoes @	\$6.50/cwt.	\$.50
May 1				
Bought potatoes @	\$8.20/cwt.	Sold (offset) potatoes @	\$8.45/cwt.	\$.25
Profit from futures	-1.95/cwt.	Profit from futures	\$1.95/cwt.	
REALIZED PRICE	\$6.25/cwt.			
*Based on May futures				

I would now like to turn to the current supply/demand situation, particularly as it affects this area of the country. As you are probably aware, fall production this past season, spurred on by the previous years attractive prices was a record 303 million cwt. The production increase versus the previous season amounted to 26 million cwt. Of this increase, approximately 20.3 million occurred in the three western states of Idaho-Washington-Oregon (IWO). The geographic breakdown of supplies has become distorted the past several seasons due to the exceptional production power of the IWO area. It is rapidly becoming the potato basket of the country and represents 56% of the national fall total.

	<u>Production (MM cwt.)</u>	
	<u>1975</u>	<u>1976</u>
Idaho	76.9	85.2
Oregon	24.4	28.9
Washington	<u>48.3</u>	<u>55.8</u>
	149.6	169.9 + (14%)

The 10% increase in Idaho is due primarily to acreage increases. Oregon's production has increased 60% the past two years due to the major land reclamation projects in the Umatilla Basin. Washington's output is up 32% the past two years due to sharp yield increases as irrigated acreage in the Columbia Basin has come into production. Conversely, the eight eastern states which account for the majority of round white production have shown only small increases. The important state of Maine experienced an increase of less than 1 million cwt. due to excessive moisture during the growing season. Thus based upon the supply/side of the equation alone, the outlook for prices might be considered bleak. Even the situation in Canada was somewhat bleak as significant increases (7-8 million cwt.) in production had taken place in the Maritime Provinces.

However, even before the North American harvest was counted, developments outside these shores began to take shape to avert a potential price disaster. The surprise started in August and is still continuing. It is the heavy export demand from Western Europe due to the second consecutive year of shortages. The estimate for the crop in the EEC continues to reflect a light crop induced by a prolonged searing drought this past summer. The following is a breakdown, expressed in millions of cwt. for output the past three years: 1974 - 915; 1975 - 730; 1976 - 650. Thus even though North America had about 34 million cwt. too many, western Europe was looking at a shortfall of over 200 million.

Since the final production figures were published in early December, the USDA has issued two reports reflecting disappearance thus far and the results are impressive. Disappearance has been a record for the month of December and also for the period up to December 1. Canada has also announced record disappearance in her last two stocks reports. The surplus of North American production versus last season of 34 million has been reduced as of January 1 down to 13.5 million cwt. In other words, disappearance has increased by more than 20 million cwt. What has caused this surge you might ask?

1. Fresh Exports - mainly to Western Europe but also to North Africa;
2. Processed Exports - mainly to Western Europe and Japan.
3. An early, orderly marketing of the crop which involved movement of weather damaged stocks to the processors to improve quality of remaining stocks.
4. Shrink a little higher than normal on a record size crop.

While we do not wish to overemphasize the export scene, a few facts would seem appropriate. The 1975/1976 season saw exports of 20.9 million cwt. of fresh potatoes and fresh potato equivalent of potato products. This represented about 6% of total U.S. production, and three times that shipped in previous seasons.

A. Fresh exports during the 1975/76 marketing year increased by 267% over the previous season to 10.6 million cwt. Leading importing countries in descending order of importance were Canada (5.3), Sweden (1.1), Portugal, Holland and Belgium. The pace for the

three months of the 1976/77 season has accelerated sharply as shown by the following slide. Not only are the monthly rates far above the previous year but the importing countries have changed (data for December shows the same rate as November). France is now far and away the leader, followed by Algeria, Holland and then Canada.

B. Flakes and granules exports have shot up even faster. Shipments during the 1975/76 season were ahead six-fold over the previous year, as illustrated on the next slide. This season has witnessed an acceleration of the rate (December use not on chart was at 24 million pounds). Major countries importing these products are West Germany, the U. K. and France. (As you may know, U. S. fresh potatoes are excluded from the U. K. for phyto-sanitary reasons. However, this does not include processed products.)

The USDA has forecast that exports could exceed 30 million cwt. with outside possibility heard in some trade circles of upwards of 40 million. We would be more disposed to believe the former until more data is forthcoming. However, all is not bliss on the export scene. Some shipments of eastern round whites have been quarantined in France and Holland for suspected presence of "ring rot" disease. Europeans have a fixation about this disease and will go seemingly to any lengths to insure that no shipments enter containing same. The potential threat to Eastern exports can turn out as a blessing in disguise to western growers (as witnessed by the recent business booked last week out of Oregon and potential for more).

Getting back to the supply side, the situation would seem to have improved due to record offtake. As of January 1st, (which represents most recent data available from USDA; next report due out February 9th). U.S. stocks had been reduced to 169 million cwt. However, supplies still exceed last year by 12 million. Supplies in eight eastern states are below last year. Maine stocks of 17.8 million cwt. are the lowest since 1952. Due to the very high processing rate in the state, it looks as if the remaining 22-23 weeks of the season will use up 14,350 estimated available carloads. During the last three seasons, shipments ranged from 17,000 to 23,000. Thus the possibility exists that Maine stocks may run out before the seasons end. This could open up the possibility of western russets being processed in Maine late this season.

Stocks in the IWO area have been reduced to 12 million cwt. more than last year. Processing activity remains abnormally high and must be considered the hope for removing much of the surplus as the season progresses. Through January 1st, processing volume is up 8.6 million cwt. over last season. The continuance of the high export rate of flakes and granules are almost a must to accomplish this end. Exports of fresh stocks have emerged as a source of additional volume either because of difficulty with disease in round whites or because of continuance of import needs by Western Europe. Cash prices in western areas have firmed recently as a result of processed exports. For these prices to maintain these levels and possibly strengthen later this season, exports would have to be maintained. Moreover, fresh movement western Europe would also be somewhat of a prerequisite.

In summary, one must pose the obvious question, "can we see western russet futures move sharply higher?" The answer to that question lies in the eventual acceptance of the contract by both the trade and speculative set alike. In the interim, this market will tend to move in sympathy with the round white contract traded in New York. We are looking for a firm market. Should the next stocks report reveal another record disappearance, contract highs will be seriously challenged. At this juncture we do not see the market coming anywhere near the high levels of last year.

Should there be time remaining for questions, I would be happy to entertain them.