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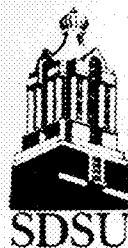
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MARKETING LOAN LOOKS BETTER THAN ALTERNATIVES IN 1999

by

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Management & Marketing

The way things are shaping up this fall, it looks like storage for corn and soybeans under the government loan program is the most viable alternative, provided storage space is available at a reasonable cost. Storage under the loan program has some distinct advantages over other possibilities. First, the producer is guaranteed the loan rate as a minimum price. If the price improves above the loan rate, the loan can be repaid and the commodity sold at the higher price. Thus, the loan program works like a put option in the futures market or a minimum price contract in the cash market, but without the need to pay an option premium. But even better, the loan is available immediately in cash, so it can be used to retire operating loans or invested in income earning assets. The only costs to using this marketing alternative are storage costs (keeping the commodity in condition and shrink due to handling and dehydration), and possibly interest if the posted county price (PCP) moves above the loan rate. Thus, it gives as much protection against risk as selling at harvest, but allows potentially for a higher price. (See table below.) If sufficient on-farm storage is not available, commercial storage should be evaluated carefully. It pays to use commercial storage only if the increase in price will cover the storage costs. For example, some elevators are charging 4 cents a bushel per month, with a four month minimum. That's a 16 cent minimum storage charge. Bid prices for January delivery range from even to 20 cents over immediate delivery.

Taking the loan deficiency payment (LDP) and immediately pricing the commodity may be the best alternative to minimize risk for those operators without storage. If the crop is sold immediately on the spot market, and the LDP taken, one will receive about the same amount of cash as using the loan, but will not be able to participate in any price increases in the cash market. But, neither will the owner have to be concerned about keeping the commodity in condition or

(Continued on p. 2)



GRAIN STORAGE CONSIDERATIONS FOR 1999-2000

by

Alan May
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The nation's large corn and soybean crop this year presents the same storage challenges for grain producers that they faced a year ago. Low prices are encouraging the use of on-farm and commercial storage. However, regardless what price the market is offering for grain, there is still a need to evaluate the costs associated with grain storage. Other alternatives to storing grain that may allow the capture of higher prices after harvest also should be evaluated. Strategies that involve storage or selling grain at harvest are outlined in the companion article written by Don Peterson in this issue of the "Commentator".

Cost of storage is important to consider in any pricing strategy. No matter if grain is stored commercially or in on-farm facilities, there are costs associated with storage. Commercial storage will cost 3-4¢ per bushel per month. Home storage may easily cost as much when the value of the storage facility and the potential for shrink and spoilage over the storage period is considered. There is also the consideration of interest cost. If grain is stored, it is an asset that cannot "produce income" or gain in value other than by prices going higher. In other words, if the grain was sold and converted to cash, the cash could be used to pay off loans to reduce interest costs to the business. The cash also could be re-invested in the business or in an interest bearing account. This "opportunity cost" is an important one to evaluate in the decision on whether or not to store grain.

The end result in this analysis is to consider the length of time grain is to be stored and the price that must be received at the end of the storage period to at least recover the cost of storing grain. There will be times when the storage costs will be recovered as prices increase. There will be times when prices increase by a small amount, stay constant or decline and storage costs are not recovered.

(Continued on p. 3)

Strategy Characteristics	Use Loan Store Under Loan	Take LDP at Harvest							
		Sell at Harvest	Store Unpriced	Store Cash Fwd Contract	Store Hedge	Store Buy Put	Store MPC	Store w/ Hedge & by Call	Store CFC & by Call
Gain price increases?	Yes	No	Yes	No	No	Yes	Yes	Yes	Yes
Subject to price decreases?	No	No	Yes	No	No	No	No	No	No
Gain basis improvement?	Yes	No	Yes	No	Yes	Yes	Yes	Yes	No
Subject to basis widening?	No	No	Yes	No	Yes	Yes	No	Yes	No
Must deliver?	Yes			Yes			yes		yes
Costs Incurred									
Storage?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interest on CCC loan?	Maybe	No	No	No	No	No	No	No	No
Margin calls?	No	No	No	No	Yes	No	No	Covered by Call	No
Option fees?	No	No	No	No	No	Yes	Yes	Yes	Yes
Storage interest?	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes

shrink, and will not have storage interest, that is, interest costs on unsold product¹. If the owner wants to regain upside potential, buying a call option will allow participation in any improvements in the futures market. However, this will not provide any participation in improvement in the local basis. Using this method involves premium payments and brokers commissions.

One of the riskiest alternatives is to store the grain unpriced after taking the LDP. If the LDP has been taken and the price declines by the time the product is sold, the net return is less than the loan rate. On the other hand, if after the LDP is taken, the price rises before the commodity is sold, greater profits will be gained, provided storage costs, including storage interest, are recovered. As can be seen from the table above, when the commodity is unpriced, one is open to benefit from price and basis improvements, but is subject to their deterioration as well. Also, any alternative in which the product is stored, but not under the marketing loan, storage costs and storage interest will be incurred.

Taking the LDP at harvest and cash forward contracting for later delivery makes sense, given the large carry from current delivery to January, especially if one wants to postpone income receipts into next year. Some locations have 20 cents or more carry from October to January. Other locations have virtually none. Where the carry is greater than the cost of storage, this would be better than taking the LDP and selling at harvest. The down side of this action, relative to the marketing loan, is the loss of potential gains in the market, should any occur. Partial recovery of a price improvement can be obtained with the use of a call option. This is discussed below.

A very close alternative is to take the LDP, store the grain, and use a storage hedge. This would

allow one to pick up any improvement in basis that may occur and not be tied to delivering to any one location. On the other hand, basis may not improve as expected and margin money requirements must be met and maintained if the futures price improves. There is also the need to pay broker's commissions, cover storage interest, and other storage costs. Using a put instead of a hedge would allow participation in a price increase in the futures market, but like the hedge, one would still be subject to basis risk. Also, the cost of the put and broker's commission have to be covered.

Using a minimum price contract (MPC) along with storage gives about the same results as storing under loan, except one must pay the cost of a put and one does not receive the loan value of the crop up front, as with storing under loan. This would be useful when a farm cannot use the loan program.

Taking the LDP and using a storage hedge coupled with a call option results in a synthetic put. It has the same benefits as a put, but allows the seller to cash in the call, should the call increase in value (due to a higher futures price) at a time when one does not want to, or cannot deliver. The call will also cover margin calls from the futures portion of the hedge during a time of rising prices. However, there are added expenses with this alternative, namely the premium for the call, margin money for the hedge, and broker commissions.

Taking the LDP, putting the corn in storage, and using a cash forward contract for later delivery with a call option allows one to participate in price increases in the futures market while having the security of a known minimum price. Otherwise, it is the same as the cash forward contract alternative discussed above but with the added expense of the call option.

In all of the above alternatives in which the crop is stored with the LDP taken rather than using the loan, more expenses (e.g. storage interest on unsold product and other storage costs) and, in some cases, more risks are incurred. Each farm operator needs to evaluate

¹ Interest must be charged against unsold product, because it represents either forgone interest or interest on debt that could be repaid with the proceeds from the sale of the product.

his/her benefit-risk preferences and choose the strategy(s) that best fits his/her operation. The table may be of benefit to operations that may bump against the \$75,000 payment limitation. They will need to watch for opportunities to move at least part of their production without the benefit of the LDP or forfeit grains under loan to avoid payment limitations. They can still use the marketing loan, but the benefit of the loan price over the PCP at the time the loan is repaid will count towards the \$75,000 limitation.

(Grain Storage cont'd from p. 1)

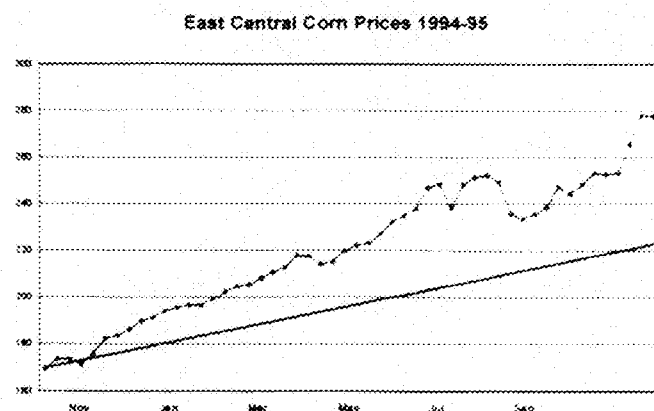
Price history shows how one may evaluate the cost of storing grain over time. The following charts show the average cash price for the East Central region of South Dakota and the price that would have to be received after harvest in order to pay the cost of storage. The following assumptions are made about the cost of storage in this analysis: Physical storage costs: This cost is calculated at 3¢ per bushel per month. This includes the return on the storage asset along with the cost of shrink and spoilage. Interest costs: This cost is calculated using the average harvest price of corn in east central South Dakota multiplied by simple 10% interest, divided by twelve months to arrive at the monthly interest cost in cents per bushel per month. Harvest time prices vary in the following examples, so the interest cost will vary based on the formula used in the interest calculation. For example, interest cost calculated on corn valued at \$1.70/bu. at harvest will be less than the interest cost on corn valued at \$2.80/bu. at harvest. This same formula would be used for other crops. Interest would vary depending upon the harvest time price per bushel of that particular crop.

Figures 1-5 can be used to show the average East Central South Dakota cash corn prices from November through October of 1994-95, 1995-96, 1996-97, 1997-98, and 1998-99. Although most grain is usually not stored for a full year, the examples use the full year to make the following analysis consistent.

Figure 1. The average harvest time price for corn in November 1994 was approximately \$1.70/bu. Assume storage costs of 3¢ per bushel per month and interest cost of 1.4¢ per bushel per month (4.4¢/bu./mo. or 53¢/year). In other words, the cash price for corn had to increase by 4.4¢ each month to recover the cost of storage. If grain was stored for the entire year, a minimum price of \$2.23/bu. in late October of 1995 would have been required to recover a year of storage costs ($\$1.70 + .53 = \2.23). The straight, upward sloped line on the chart represents the storage recovery price. The average price for corn during that same time frame in east central South Dakota increased from \$1.70/bu. in November 1994 to almost \$2.80/bu. by late October of 1995. Since cash prices remained higher than the price necessary to recover storage cost, storage costs were recovered. However, it must be noted that strategies other than

storing grain may have accomplished the same, or

Figure 1.



better, net price results. Simply recovering the storage cost may not have been the best, or only, alternative to pricing corn.

Figure 2.

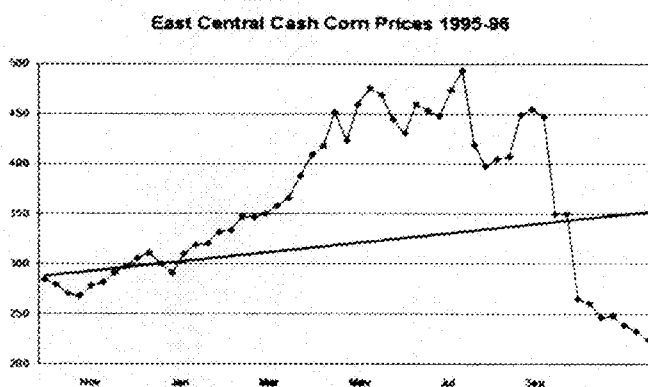


Figure 2. When cash prices are compared with the storage recovery price, costs associated with the storage of the 1995 crop would have been paid only until early September of 1996. Storage costs: 2.3¢ interest, 3¢ physical storage cost (5.3¢/bu./mo., 64¢/year.)

Figure 3. (Figure on next page) In 1996-97, cash prices were at sufficient levels until May 1997 to recover the costs related to storage. From that point until late October of 1997, cash prices declined below levels necessary to pay the simple storage costs. Storage cost: 1.8¢ interest, 3¢ physical storage (4.8¢/bu./mo., 58¢/year).

Figure 4. (Figure on next page) In 1997-98, prices remained somewhat steady during the winter months but declined steadily from March 1998 to October 1998. At no point during this time frame did cash prices reach levels necessary to pay for storage costs. Storage cost: 1.9¢ interest, 3¢ physical storage (4.9¢/bu./mo., 59¢/year).

Figure 3.

East Central Cash Corn Prices 1996-97

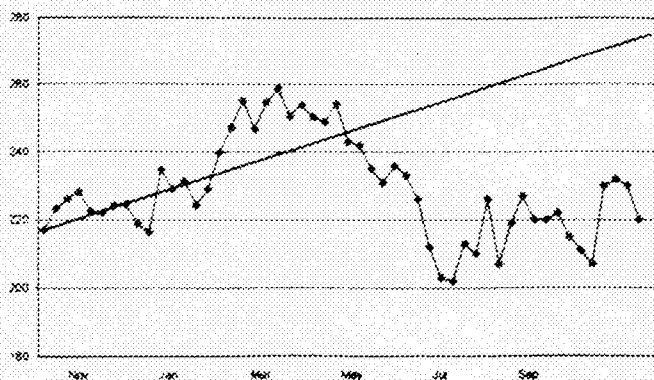


Figure 4.

East Central Cash Corn Prices 1997-98

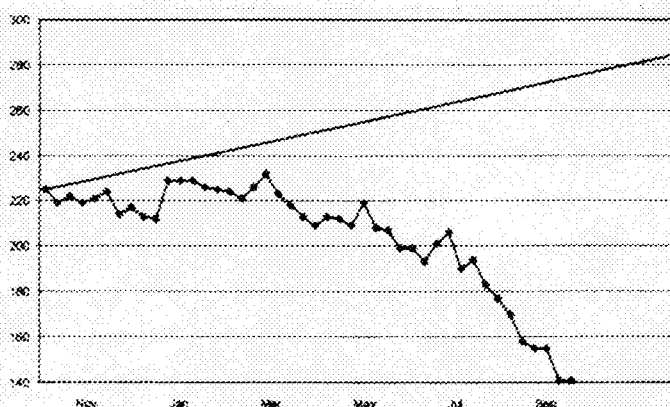
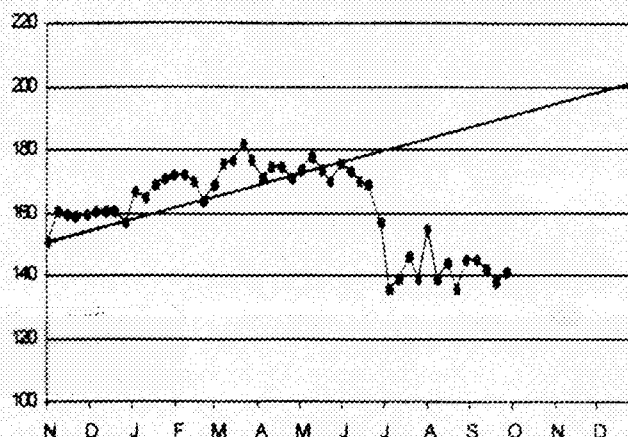


Figure 5. In 1998-99, cash corn prices in east central South Dakota stayed at or above the storage recovery costs until May 1999. After that time, corn prices declined so that storage costs could not be recovered after May of 1999. Storage costs: 1.3¢ interest, 3¢ physical storage (4.3¢/bu./mo. 52¢/year).

Figure 5.

East Central Cash Corn Prices 1998-99



ECONOMICS COMMENTATOR

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