9-2-1998

Grain Storage: Value, Costs, and Returns

Roger Selley
University of Nebraska-Lincoln, RSELLEY1@UNL.EDU

Follow this and additional works at: http://digitalcommons.unl.edu/agecon_cornhusker
Part of the Agricultural Economics Commons

http://digitalcommons.unl.edu/agecon_cornhusker/831

This Article is brought to you for free and open access by the Agricultural Economics Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Cornhusker Economics by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
Grain Storage: Value, Costs, and Returns

Promise of a good crop and low prices at harvest has increased the interest in storage. Many elevators are requiring that 20% or more of the grain be sold upon delivery or be placed under a deferred pricing contract so they can move the grain. Commercial storage rates are expected to be 2½ to 3 cents or more per bushel where available. Farm storage rental charges may approach commercial rates.

Deciding whether to use storage if available and what to pay for storage depends upon several factors including: handling capacity at harvest, convenience of available facilities and any anticipated increase in prices.

First priority should be given to storage that facilitates harvest, i.e. that avoids having to shut the combine down because of handling problems. A limited amount of convenient storage on the farm will be worth more than commercial storage involving a long-haul and long waiting lines. However, keep in mind on-the-farm storage will require an additional in and out and loading and unloading with added labor and equipment costs and grain handling losses. Drying is an additional consideration and drying facilities will be required if wet corn will be held for any length of time.

On-farm drying can be cheaper, but don't expect to save money with farm drying without good management. Natural air drying of 20% moisture corn will typically require 0.3 to 0.7 KWH per bushel in Central Nebraska. A batch-in-bin system will require about 0.1 gallon of propane (including equivalent electricity required for fans) to dry a bushel of 20% moisture corn.
(0.02 gal/point/bu). Trying to dry over 20% moisture corn with a natural air drying in Central Nebraska can be expected to have some spoilage and drying may not be completed until spring. Also, be aware of the cost of overdrying and handling losses.

Consider for example the following comparison using 0.5 percent on-farm handling losses and $1 per gallon propane:

<table>
<thead>
<tr>
<th>Shrink</th>
<th>Commercial</th>
<th>On-Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.5%/pt</td>
<td>0.5%/bu</td>
</tr>
<tr>
<td>Drying Cost</td>
<td>3.4 cents/bu/pt</td>
<td>2 cents/bu/pt</td>
</tr>
</tbody>
</table>

The above differences appear to leave plenty of room for savings with on-farm drying. However, add maintenance and repair costs for the dryer (some estimates are 3 cents per bushel), the additional labor, handling and hauling costs (perhaps 2 cents or more above hauling direct to market), and ownership (depreciation and interest) or rental cost of the facility. Finally, recognize the farm drying system will have additional costs if there is any spoilage or excess drying.

When considering on-farm storage rental rates, keep in mind use of a facility at harvest probably effectively precludes anyone else using it that year. As a result, farm storage is often rented for the year (expiring prior to the next harvest). A recent survey of Iowa rental rates reported rates of 1-3 cents per bushel per month and 9-18 cents per bushel per year. A minimum charge, e.g. for 3 months, could be specified with additional use at a monthly rate above 3 months.

If storage is being considered to take advantage of anticipated market price increases, don't forget to include interest on the value of the grain and to recognize the added risks of losses from spoilage, theft, etc., and excess drying that may be required to keep the grain in good condition. Commercial storage assumes the physical risks. Space doesn't permit a treatment of the pricing alternatives, but one alternative would be to consider a delayed pricing contract where you give title of the grain to the elevator (and assume that risk) and price it later. A delayed pricing contract has the advantage of not having to worry about the grain but being in a position to benefit from any price increase and any improvement in basis. A basis improvement means the local price increases relative to the futures price. A basis improvement typically follows 3 to 4 months after harvesting a large crop.

Roger Selley, (402) 762-4442
Extension Economist, SCREC