GRAIN STORAGE: BINS vs. BAGS?

Deciding which grain storage system, or combination of systems, to use on your operation can be challenging. You should consider several factors besides price before making your purchase decision.

Essential factors to consider:

- Operational requirements
- Depreciation
- Repair & maintenance
- Existing systems
- Set-up costs
- Required site preparation
- Financing interest & opportunity costs
- Labour availability
- Required or desired storage system
- Potential spoilage
- Farms future plans

PROs

Grain Bag Storage	Grain Bin Storage
Quick availability in times of excess production	The assurance that product will be relatively unspoiled (solid protection and adequate aeration)
Typically a minimal investment	An investment into overall operation value
The ability to be placed in any location	Future re-sale opportunity
	Ease of use
	Multi-purpose functionality (e.g. fertilizer or grain storage in smoothwall bins)

CONs

Grain Bag Storage	Grain Bin Storage
Reduced moisture management	A longer set-up time and site preparation
No ability to mitigate heat	A fixed location
Material wastage (grain and plastic)	Maintenance requirements
No re-sale value	Cleaning required between uses
A risk of pest, wildlife, moisture and contamination damage	A larger investment requirement
Short storage periods (six to eight months)	
Equipment that must be purchased, leased or custom sourced	

In order to arrive at the best solution for your farm, ensure that you are evaluating the entire cost of the storage options under consideration and the temporary or permanent nature of your storage needs. Review the questions below to help simplify the decision making process.

Consider your operation's needs when making a grain-storage decision:	Yes	No
Do you need to store grain for less than eight months?	◯	◯
Is your land rented or leased, and investment in permanent storage is not desirable?	◯	◯
Is labour and trucking limited during harvest?	◯	◯
Is your land located far from your bin system(s)	◯	◯
Do you plan to leave the business in the near future?	◯	◯
Is there an agricultural plastic recycling site within reasonable travel distance?	◯	◯
Are you storing lower-quality grains that don't require close monitoring?	◯	◯

If you've answered "No" to most of these questions permanent grain storage might be the right solution for your farm.

Grain Bins and Bags: Estimated Price Comparison*

Description	Corrugated	Corrugated	Smoothwall	Grain Bagging System	
Base type	**Hopper on gravel**	**Flat bottom on concrete**	**Hopper bottom on concrete**	**N/A**	
Size (25,000 bushels)	5 bins at 5,000 bushels/bin			25,000 bushels bagged	
Years of use	25	25	25	15	
Cost/bushel (includes equipment, site preparation and set-up)	$3.35	$3.75	$5.25	$80,00	Bagger and Extractor
				$0.07	cost of bag/bushel
Storage cost of purchase including, base, site prep and set-up	$83,750	$93,750	$131,250	$80,000	Bagger and Extractor
				$1,750	cost of bags/year
Depreciation	10%	4%	4%	20%	For Bagger and Extractor
	$77,404	$59,259	$82,962	$76,833	
Salvage value	40%	30%	60%	10%	
	$33,500	$28,125	$78,750	$8,000	
Repairs and maintenance (bins 2%, equipment 5%)	$1,675	$1,875	$2,625	$4,000	
Interest on investment (loan rate 5% at 60 months)	$11,078	$12,401	$17,361	$10,582	
Spoilage 0.5% at $5/bushel	$0	$0	$0	$9,375	-
Total investment cost over lifespan to store	$140,407	$139,160	$155,448	$172,790	Bagger and Extractor
				$26,250	Bags
25,000 bushels/year				$199,040	-
Total annual cost for 25,000 bushels of storage	$5,616	$5,566	$6,218	$13,269.33	-
Cost/bushel/year	$0.22	$0.22	$0.25	$0.53	-

Visit your local CO-OP® Agro Centre to talk about the optimal grain storage choices for you.

*This example is an excerpt from the Alberta Agriculture and Forestry's *Grain Storage: Considerations* report and is based on the assumptions specified therein. This example has been modified to include only grain bin and bag considerations. Read the full report and view full example here: http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/sis15016