

GRAIN STORAGE COST-BENEFIT TEMPLATE

Financial gains from storage			Example	(\$/t)	Option 1:	\$/t	2:	\$/t	3:	\$/t	4:	\$/t
A	Harvest logistics/timeliness	Grain price x reduction in value after damage % x probability of damage %	16.20									
B	Seasonal trends in market	Post harvest grain price – harvest grain price										
C	Local market gain (feed to feedlot)	Post harvest grain price – harvest grain price										
D	Freight (peak vs out-of-season rate)	Peak rate \$/t – post harvest rate \$/t	20.00									
E	Cleaning to improve the grade	Clean grain price – original grain price – cleaning costs – shrinkage										
F	Blending to lift average grade	Blended price – ((low grade price x %mix) + (high grade price x %mix))										
G	Drying for early harvest	Grain price x reduction in value after damage % x probability of damage %										
H	Other benefits											
I	Total benefits	Sum of benefits	36.20									
J	Capital cost	Infrastructure cost ÷ storage capacity	155.00									
Fixed costs												
K	Annualised depreciation cost	Capital cost \$/t ÷ expected life of storage eg 25yrs	6.20									
L	Opportunity cost on capital	Capital cost \$/t x opportunity or interest rate eg 8% ÷ 2	6.20									
M	Total fixed costs	Sum of fixed costs	12.40									
Variable costs												
N	Storage hygiene	(Labour rate \$/hr x time to clean hrs ÷ storage capacity) + structural treatment	0.23									
O	Aeration cooling	Indicatively 23c for the first 8 days then 18c per month /t	0.91									
P	Repairs and maintenance	Estimate eg. capital cost \$/t x 1%	1.51									
Q	Inload/outload time and fuel	Labour rate \$/hr ÷ 60 minutes ÷ auger rate t/m x 3	0.88									
R	Time to monitor and manage	Labour rate \$/hr x total time to manage hrs ÷ storage capacity	0.24									
S	Opportunity cost of stored grain	Grain price x opportunity or interest rate eg 8% ÷ 12 months x No. months stored	7.20									
T	Insect treatment cost	Treatment cost \$/t x No. of treatments	0.35									
U	Cost of bags or bunker tarp	Price of bag ÷ bag capacity tonne										
V	Shrinkage (spilt/lost grain)	Grain price \$/t x percentage lost eg 0.2%										
W	Drying costs (optional)	Total drying costs ÷ total tonne dried										
X	Total variable costs	Sum of variable costs	11.32									
Y	Total cost of storage	Total fixed costs + total variable costs	23.72									
Z	Profit/Loss on storage	Total benefits - total costs of storage	12.48									
	Return on investment	Profit or loss ÷ capital cost x 100	8%									
	Payback period years	Capital cost ÷ profit or loss on storage	13 years									

