

Cost of Carry calculation for KC Wheat

H-K	Days	storage	interest	futures
days	61	0.197	0.0225	664.40
days	47			

Cost of Carry			
<u>Cost of carry at</u>		<u>2.25%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
2.50 interest		1.92 interest	
14.52 total cost of carry		11.18 total cost of carry	
<u>Cost of carry at</u>		<u>3.25%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
3.61 interest		2.78 interest	
15.63 total cost of carry		12.04 total cost of carry	
<u>Cost of carry at</u>		<u>4.25%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
4.72 interest		3.64 interest	
16.74 total cost of carry		12.89 total cost of carry	
<u>Cost of carry at</u>		<u>5.25%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
5.83 interest		4.49 interest	
17.85 total cost of carry		13.75 total cost of carry	

Cost of Carry			
<u>Cost of carry at</u>		<u>1.75%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.2590 storage	
1.94 interest		1.4972 interest	
13.96 total cost of carry		10.7562 total cost of carry	
<u>Cost of carry at</u>		<u>2.75%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
3.05 interest		2.35 interest	
15.07 total cost of carry		11.61 total cost of carry	
<u>Cost of carry at</u>		<u>3.75%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
4.16 interest		3.21 interest	
16.18 total cost of carry		12.47 total cost of carry	
<u>Cost of carry at</u>		<u>4.75%</u>	
Full carry on first notice day		Full carry on last trading day	
12.02 storage		9.26 storage	
5.27 interest		4.06 interest	
17.29 total cost of carry		13.32 total cost of carry	

Full carry per month = (price x interest rate) / 12 + (commercial storage rate per month)

Spread Price equals Interest Rate

% of full carry

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seasonal storage rate	
7/1 to 11/30	0.296
12/1 to 6/30	0.197

spread	N-U	N-Z**	N-H**	N-K**	N-N**				
Starts	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013
1st end	9/3/2013	11/30/2013	11/30/2013	11/30/2013	11/30/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013
2nd end		12/2/2013	3/3/2014	5/1/2014	6/30/2014				
3rd end					7/1/2014				
1st days	64	152	152	152	152	0	0	0	0
2nd days		2	93	152	212				
3rd days					1				
1st rate	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.296	0.296
2nd rate		0.197	0.197	0.197	0.197				
3rd storage		0.00394	0.18321	0.29944	0.41764				
Total Storage	0.1894	0.4539	0.6331	0.7494	0.8705	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0352	0.0847	0.1348	0.1672	0.2002	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.2246	-0.5386	-0.7679	-0.9166	-1.0708	0.0000	0.0000	0.0000	0.0000
Spread Close	-0.022	-0.058	-0.13	0.364	0.714	0	0	0	0
% Full Carry	9.79%	10.77%	16.93%	-39.71%	-66.68%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-10.701	-10.514	-8.399	-14.979	-17.756	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
blend		0.2947143	0.2584204	0.2465	0.2384986				

spread	Z-H	Z-K	Z-N**	Z-U**	Z-Z**				
Starts	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
1st end	3/1/2013	5/1/2013	6/30/2013	6/30/2013	6/30/2013	12/3/2012	12/3/2012	12/3/2012	12/3/2012
2nd end			7/1/2013	9/3/2013	11/30/2013				
3rd end					12/2/2013				
1st days	88	149	209	209	209	0	0	0	0
2nd days			1	65	153				
3rd days					2				
1st rate	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197	0.197
2nd rate			0.296	0.296	0.296				
3rd storage			0.00296	0.1924	0.45288				
Total Storage	0.1734	0.2935	0.4147	0.6041	0.8686	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0503	0.0851	0.1199	0.1565	0.2079	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.2236	-0.3786	-0.5346	-0.7606	-1.0764	0.0000	0.0000	0.0000	0.0000
Spread Close	-0.12	-0.102	0.34	0.318	0.282	0	0	0	0
% Full Carry	53.66%	26.94%	-63.60%	-41.81%	-26.20%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-2.389	-5.065	-14.159	-13.260	-12.454	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
blend			0.1974714	0.2204854	0.2386126				

Cost of Carry calculation for Wheat

H-K Days storage interest futures
 days of st **61** **0.565** **0.0225** **603.20**
 days of st **59**

Cost of Carry	
<u>Cost of carry at</u>	<u>2.25%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>2.27</u> interest	<u>2.19</u> interest
36.73 total cost of carry	35.53 total cost of carry
<u>Cost of carry at</u>	<u>3.25%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>3.28</u> interest	<u>3.17</u> interest
37.74 total cost of carry	36.50 total cost of carry
<u>Cost of carry at</u>	<u>4.25%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>4.28</u> interest	<u>4.14</u> interest
38.75 total cost of carry	37.48 total cost of carry
<u>Cost of carry at</u>	<u>5.25%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>5.29</u> interest	<u>5.12</u> interest
39.76 total cost of carry	38.45 total cost of carry

<u>Cost of carry at</u>	<u>1.75%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.3350 storage
<u>1.76</u> interest	<u>1.7063</u> interest
36.23 total cost of carry	35.0413 total cost of carry
<u>Cost of carry at</u>	<u>2.75%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>2.77</u> interest	<u>2.68</u> interest
37.24 total cost of carry	36.02 total cost of carry
<u>Cost of carry at</u>	<u>3.75%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>3.78</u> interest	<u>3.66</u> interest
38.25 total cost of carry	36.99 total cost of carry
<u>Cost of carry at</u>	<u>4.75%</u>
Full carry on first notice day	Full carry on last trading day
34.47 storage	33.34 storage
<u>4.79</u> interest	<u>4.63</u> interest
39.25 total cost of carry	37.97 total cost of carry

Full carry per month = (price x interest rate) / 12 + (commercial storage rate per month)

Spread Price Interest Rate
 equals **19** **-15.341**

% of full carry **51.72**

spread	N-U	N-Z	N-H	N-K	N-N				
Starts	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013	7/1/2013
Ends	9/3/2013	12/2/2013	3/3/2014	5/1/2014	7/1/2014	7/1/2013	7/1/2013	7/1/2013	7/1/2013
Total Days	64	154	245	304	365	0	0	0	0
Storage rate	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Total Storage	0.2336	0.5621	0.8943	1.1096	1.3323	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0341	0.0820	0.1305	0.1619	0.1944	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.2677	-0.6441	-1.0247	-1.2715	-1.5267	0.0000	0.0000	0.0000	0.0000
Spread Close	-0.05	-0.08	-0.154	0.3	0.43	0	0	0	0
% Full Carry	18.68%	12.42%	15.03%	-23.59%	-28.17%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-12.119	-13.225	-12.764	-19.589	-20.396	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

spread	Z-H	Z-K	Z-N	Z-U	Z-Z				
Starts	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012	12/3/2012
Ends	3/1/2013	5/1/2013	7/1/2013	9/3/2013	12/2/2013	12/3/2012	12/3/2012	12/3/2012	12/3/2012
Total Days	88	149	210	274	364	0	0	0	0
Storage rate	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Total Storage	0.3212	0.5439	0.7665	1.0001	1.3286	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0488	0.0826	0.1164	0.1519	0.2018	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.3700	-0.6265	-0.8829	-1.1520	-1.5304	0.0000	0.0000	0.0000	0.0000
Spread Close	-0.098	-0.028	0.354	0.304	0.274	0	0	0	0
% Full Carry	26.49%	4.47%	-40.09%	-26.39%	-17.90%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-10.293	-14.050	-21.654	-19.315	-17.867	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

spread	K-N	K-U	K-Z	K-H	K-K				
Starts	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013	5/1/2013
Ends	7/1/2013	9/3/2013	12/2/2013	3/3/2014	5/1/2014	5/1/2013	5/1/2013	5/1/2013	5/1/2013
Total Days	61	125	215	306	365	0	0	0	0
Storage rate	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Total Storage	0.2227	0.4563	0.7848	1.1169	1.3323	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0339	0.0695	0.1196	0.1702	0.2030	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.2566	-0.5258	-0.9043	-1.2871	-1.5352	0.0000	0.0000	0.0000	0.0000
Spread Close	0.3820	0.3320	0.302	0.228	0.682	0	0	0	0
% Full Carry	-148.88%	-63.15%	-33.40%	-17.71%	-44.42%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-40.102	-25.512	-20.449	-17.781	-22.326	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

spread	U-Z	U-H	U-K	U-N	U-U				
Starts	9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/3/2013	9/3/2013
Ends	12/2/2013	3/3/2014	5/1/2014	7/1/2014	9/1/2014	9/3/2013	9/3/2013	9/3/2013	9/3/2013
Total Days	90	181	240	301	363	0	0	0	0
Storage rate	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Total Storage	0.3285	0.6607	0.8760	1.0987	1.3250	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0482	0.0970	0.1286	0.1612	0.1945	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.3767	-0.7576	-1.0046	-1.2599	-1.5194	0.0000	0.0000	0.0000	0.0000
Spread Close	-0.03	-0.104	0.35	0.48	0.936	0	0	0	0
% Full Carry	7.96%	13.73%	-34.84%	-38.10%	-61.60%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-13.931	-12.917	-21.456	-22.029	-26.161	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

spread	H-K	H-N	H-U	H-Z	H-H				
Starts	3/1/2013	3/1/2013	3/1/2013	3/1/2013	3/1/2013	9/4/2012	9/4/2012	9/4/2012	9/4/2012
Ends	5/1/2013	7/1/2013	9/3/2013	12/2/2013	3/3/2014	9/4/2012	9/4/2012	9/4/2012	9/4/2012
Total Days	61	122	186	276	367	0	0	0	0
Storage rate	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
Total Storage	0.2227	0.4453	0.6789	1.0074	1.3396	0.0000	0.0000	0.0000	0.0000
Ttl Int	0.0342	0.0684	0.1042	0.1547	0.2057	0.0000	0.0000	0.0000	0.0000
Full Carry	-0.2568	-0.5137	-0.7831	-1.1621	-1.5452	0.0000	0.0000	0.0000	0.0000
Spread Close	0.07	0.452	0.402	0.372	0.298	0	0	0	0
% Full Carry	-27.25%	-87.99%	-51.33%	-32.01%	-19.29%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
rate of return	-19.260	-29.526	-23.330	-20.064	-17.913	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

WH4		8.794
WK4		8.34
WN4		8.21
WZ2	8.994 WU4	7.754
WH3	9.092 WZ4	8.25
WK3	9.022	
WN3	8.64	
WU3	8.69	
WZ3	8.72	

Int Rate

2.25