

DATE 29-Jul-19

Cascade Commodity Consulting Company

All information is provided as a reference only and not intended to be used for trading.

US Basis and Flat Price Values FOB Vessel

Month	Futures	CBOT	KCBT	MGE	Matiff Euro/mt	Euro	Corn CBOT	\$ AUD	Beans CBOT	AUW	BWF	3-Month LIBOR 2.33188
Sep-19	U	503.50	436.50	532.50	175.75	1.119	417.00	0.6913	891.50	233.00	201.00	
Dec-19	Z	508.50	454.00	543.25	180.50	1.127	427.00	0.6931	904.25	234.50	209.50	
Mar-20	H	518.00	470.75	556.25	183.75	1.135	436.75	0.6947	929.25	235.50	213.25	
May-20	K	523.25	481.75	565.25	186.25	1.143	440.75	0.6962	939.00	228.50	215.25	
Jul-20	N	524.75	486.75	573.25	183.50	1.150	444.25	0.6975	948.75	233.25	193.50	
		531	499.75									

Gulf Export		HRW FOB Gulf				HRS		SRW	LAKES		
Basis (ct/bu)		Ords	11.0%	11.5%	12.0%	13.0%	13.5%		13%	HRS 13.5%	14%
Old Crop		-40.00	-30.00	-15.00		TX Gulf -0 ct/bu					
New Crop		-40.00	-30.00	-15.00		0.00	14%+8		0.00		8.00
Shipment	Futures	Basis NOLA				HRS		SRW	LAKES		
Jun	N	-	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-	-
Aug	U	115.00	125.00	140.00	155.00	145.00	145.00	-	45.00	45.00	53.00
Sep	U	120.00	130.00	145.00	160.00	150.00	150.00	90.00	50.00	50.00	58.00
Oct	Z	110.00	120.00	135.00	150.00	150.00	150.00	80.00	-	-	-
Nov	Z	120.00	130.00	145.00	160.00	155.00	155.00	85.00	-	-	-
Dec	Z	120.00	130.00	145.00	160.00	160.00	160.00	90.00	-	-	-
Jan	H	110.00	120.00	135.00	150.00	-	-	85.00	-	-	-
Feb	H	120.00	130.00	145.00	160.00	-	-	90.00	-	-	-
Mar	H	120.00	130.00	145.00	160.00	-	-	95.00	-	-	-
Apr	K	110.00	120.00	135.00	150.00	-	-	-	-	-	-
May	K	115.00	125.00	140.00	155.00	-	-	-	-	-	-
Flat Price FOB Vessel		HRW				HRS		SRW	LAKES		
Shipment	Futures	Ords	11.0%	11.5%	12.0%	13.0%	13.5%		13%	HRS 13.5%	14%
Jun	N	-	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-	-
Aug	U	202.64	206.32	211.83	217.34	248.94	248.94	-	212.19	212.19	215.13
Sep	U	204.48	208.15	213.66	219.18	250.78	250.78	218.07	214.03	214.03	216.97
Oct	Z	207.23	210.91	216.42	221.93	254.73	254.73	216.24	-	-	-
Nov	Z	210.91	214.58	220.09	225.61	256.56	256.56	218.07	-	-	-
Dec	Z	210.91	214.58	220.09	225.61	258.40	258.40	219.91	-	-	-
Jan	H	213.39	217.06	222.57	228.09	-	-	221.56	-	-	-
Feb	H	217.06	220.74	226.25	231.76	-	-	223.40	-	-	-
Mar	H	217.06	220.74	226.25	231.76	-	-	225.24	-	-	-
Apr	K	217.43	221.11	226.62	232.13	-	-	-	-	-	-
May	K	219.27	222.94	228.45	233.97	-	-	-	-	-	-

PNW CASH BASIS FOB (S&T+S&F) US c/bu		HRW				NS 60 DHV			SWW	CANADA CASH BASIS	
Basis (ct/bu)		10.50%	11.0%	11.5%	12.0%	13%	13.5%	14.0%	Max 10.5% pro	Vancouver Canada	Vancouver Canada
New Crop										#2 13.5%	#1 13.8%
Old Crop		-10.00	-5.00		5.00	0.00	0.00	+10 14.5%		13.0% - 0	
Shipment	Futures	15 ct/bu prem DNS				HRS		SWW	Vancouver Canada		
Jun	N	-	-	-	-	-	-	-	-	-	
Jul	N	-	-	-	-	-	-	-	-	-	
Aug	U	140.00	145.00	150.00	155.00	85.00	85.00	85.00	122	-	
Sep	U	145.00	150.00	155.00	160.00	90.00	90.00	90.00	122	-	
Oct	Z	135.00	140.00	145.00	150.00	85.00	85.00	85.00	120	85.00	
Nov	Z	140.00	145.00	150.00	155.00	90.00	90.00	90.00	123	90.00	
Dec	Z	145.00	150.00	155.00	160.00	95.00	95.00	95.00	126	95.00	
Jan	H	-	-	-	-	-	-	-	-	-	
Feb	H	-	-	-	-	-	-	-	-	-	
Mar	H	-	-	-	-	-	-	-	-	-	
Apr	K	-	-	-	-	-	-	-	-	-	
May	K	-	-	-	-	-	-	-	-	-	
Flat Price FOB Vessel (USD/mt)		HRW				HRS		SWW	Vancouver Canada		
		10.50%	11.0%	11.5%	12.0%	13%	13.5%	14%		Vancouver Canada	Vancouver Canada
										#2 13.5%	#1 13.8%
Shipment	Futures	15 ct/bu prem DNS				HRS		SWW	Vancouver Canada		
Jun	N	-	-	-	-	-	-	-	-	-	
Jul	N	-	-	-	-	-	-	-	-	-	
Aug	U	211.83	213.66	215.50	217.34	226.89	226.89	226.89	230	-	
Sep	U	213.66	215.50	217.34	219.18	228.73	228.73	228.73	230	-	
Oct	Z	216.42	218.26	220.09	221.93	230.84	230.84	230.84	231	230.84	
Nov	Z	218.26	220.09	221.93	223.77	232.68	232.68	232.68	232	232.68	
Dec	Z	220.09	221.93	223.77	225.61	234.52	234.52	234.52	233	234.52	
Jan	H	-	-	-	-	-	-	-	-	-	
Feb	H	-	-	-	-	-	-	-	-	-	
Mar	H	-	-	-	-	-	-	-	-	-	
Apr	K	-	-	-	-	-	-	-	-	-	
May	K	-	-	-	-	-	-	-	-	-	

DNS vs. HRW spot market Chicago gateway							Spring Wheat vs HRW Basis Chicago gateway						
Spot	DNS 14%	HRW 14%	DNS 13.5%	HRW 13%	DNS 13%	HRW 12%	Aug/Sep	DNS 14%	HRW 14%	DNS 13.5%	HRW 13%	DNS 13%	HRW 12%
Basis	95.00	190.00	95.00	190.00	95.00	140.00	Basis	100.00	195.00	95.00	195.00	90.00	145.00
Futures	532.50	436.50	532.50	436.50	532.50	436.50	Futures	532.50	436.50	532.50	436.50	532.50	436.50
Del Chicago	627.50	626.50	627.50	626.50	627.50	576.50	Del Chicago	632.50	631.50	627.50	631.50	622.50	581.50

<b>Spring Wheat + HRW Milling Blend</b>						
<b>14% HRS Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	110	532.50	642.50	2.5	622.21	89.71
11.5% HRW	135	436.50	571.50	1		
14% HRS Comparison	100	532.50	632.50			
<b>Blended Discount (ct/bu)</b>	<b>10.29</b>					

<b>14% HRS Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	110	532.50	642.50	3	622.25	89.75
11.0% HRW	125	436.50	561.50	1		
14% HRS Comparison	100	532.50	632.50			
<b>Blended Discount (ct/bu)</b>	<b>10.25</b>					

<b>14% HRS Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	110	532.50	642.50	4	621.30	88.80
10.0% HRW	100	436.50	536.50	1		
14% HRS Comparison	100	532.50	632.50			
<b>Blended Discount (ct/bu)</b>	<b>11.20</b>					

<b>13% HRS Protein Blend (Western Mills)</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
14% HRS	100	532.50	632.50	1.5	608.10	75.60
11.5% HRW	135	436.50	571.50	1		
13% HRS Comparison	90	532.50	622.50			
<b>Blended Discount (ct/bu)</b>	<b>14.40</b>					

<b>13% HRS Protein Blend (Eastern Mills)</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
14% HRS	100	532.50	632.50	2	608.83	76.33
11.0% HRW	125	436.50	561.50	1		
13% HRS Comparison	90	532.50	622.50			
<b>Blended Discount (ct/bu)</b>	<b>13.67</b>					

<b>12.25% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
15% HRS	110	532.50	642.50	1	584.20	147.70
10.0% HRW	100	436.50	536.50	1.2		
12.25% HRW Comparison	150	436.50	586.50			
<b>Blended Discount (ct/bu)</b>	<b>2.30</b>					

<b>12.0% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
14% HRS	100	532.50	632.50	1	585.17	148.67
11.0% HRW	125	436.50	561.50	2		
12.0% HRW Comparison	145	436.50	581.50			
<b>Blended Discount (ct/bu)</b>	<b>-3.67</b>					

<b>12.0% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
13.5% HRS	95	532.50	627.50	1	587.90	151.40
11.0% HRW	125	436.50	561.50	1.5		
12.0% HRW Comparison	145	436.50	581.50			
<b>Blended Discount (ct/bu)</b>	<b>-6.40</b>					

<b>11.5% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
14% HRS	100	532.50	632.50	1	573.33	136.83
11.0% HRW	125	436.50	561.50	5		
11.5% HRW Comparison	135	436.50	571.50			
<b>Blended Discount (ct/bu)</b>	<b>-1.83</b>					

<b>11.5% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
12.0% HRW	145	436.50	581.50	3	570.25	133.75
10.0% HRW	100	436.50	536.50	1		
11.5% HRW Comparison	135	436.50	571.50			
<b>Blended Discount (ct/bu)</b>	<b>1.25</b>					

<b>11.0% HRW Protein Blend</b>						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
12.0% HRW	145	436.50	581.50	1	559.00	122.50
10.0% HRW	100	436.50	536.50	1		
11.0% HRW Comparison	125	436.50	561.50			
<b>Blended Discount (ct/bu)</b>	<b>2.50</b>					

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**US Grain Basis and Flat Price Values FOB Vessel**

Month	Futures	CBOT	KCBT	MGE	Matiff Euro/mt	Euro	Corn CBOT	Beans CBOT
Sep-19	U	503.50	436.50	532.50	175.75	1.12	417.00	891.50
Dec-19	Z	508.50	454.00	543.25	180.50	1.13	427.00	904.25
Mar-20	H	518.00	470.75	556.25	183.75	1.14	436.75	929.25
May-20	K	523.25	481.75	565.25	186.25	1.14	440.75	939.00
Jul-20	N	524.75	486.75	573.25	183.50	1.15	444.25	948.75

Basis (ct/bu)		US GULF			Basis (ct/bu)		PNW		
		Corn #2 YC	Sorghum	Soybeans			Corn #2 YC	Corn #3 YC	Soybeans
Shipment	Futures	CBOT			Shipment	Futures	CBOT		
July	N	-	-	-	July	N	-	-	-
A/S	U	75.00	50.00	75.00	A/S	U	110.00	110.00	100.00
O/N/D	Z	70.00	45.00	65.00	O/N/D	Z	110.00	110.00	90.00
Flat Price FOB Vessel (USD/mt)		US GULF			Flat Price FOB Vessel (USD/mt)		PNW		
Shipment	Futures	Corn #2 YC	Sorghum	Soybeans	Shipment	Futures	Corn #2 YC	Corn #3 YC	Soybeans
July	N	-	-	-	July	N	-	-	-
A/S	U	193.69	183.85	355.13	A/S	U	207.47	207.47	364.31
O/N/D	Z	195.66	185.82	356.14	O/N/D	Z	211.41	211.41	365.32

Cash and Carrying Charges

BNSF Rail: Cash Carrying Charges to Warehousemen						
HRW 11%	Aug	Oct	Dec	Feb	Apr	Jun
Basis ct/bu	125.00	125.00	130.00	125.00	120.00	115.00
Futures ct/bu	436.50	454.00	454.00	470.75	481.75	486.75
Flat Price	561.50	579.00	584.00	595.75	601.75	601.75
Rail Freight	4.73	1.35	-2.70	-4.05	2.70	2.70
Delivered Gulf	566.23	580.35	581.30	591.70	604.45	604.45
<b>Cash Carry</b>	<b>Storage Revenue ct/bu</b>					
Aug-Oct	14.12					
Aug-Dec	15.1					
Aug-Feb	25.47					
Aug-Apr	38.22					
Aug-Jun	38.22					
<b>Cash Carry</b>	<b>Monthly Storage Revenue ct/bu</b>					
Aug-Oct	7.06					
Aug-Dec	3.8					
Aug-Feb	4.24					
Aug-Apr	4.78					
Aug-Jun	3.82					

SRW	Aug	Oct	Dec	Feb	Apr	Jun
Basis ct/bu	55.00	70.00	75.00	70.00	65.00	60.00
Futures ct/bu	503.50	508.50	508.50	518.00	523.25	524.75
Flat Price	558.50	578.50	583.50	588.00	588.25	584.75
Barge Freight	-76.12	-76.12	-63.15	-60.55	-58.82	-56.23
FOB Shipper	482.38	502.38	520.36	527.45	529.43	528.53
<b>Cash Carry</b>	<b>Storage Revenue ct/bu</b>					
Aug-Oct	20.00					
Aug-Dec	38.0					
Aug-Feb	45.07					
Aug-Apr	47.05					
Aug-Jun	46.15					
<b>Cash Carry</b>	<b>Monthly Storage Revenue ct/bu</b>					
Aug-Oct	10.00					
Aug-Dec	9.5					
Aug-Feb	7.51					
Aug-Apr	5.88					
Aug-Jun	4.61					

UP Rail: Cash Carrying Charges to Warehousemen						
HRW 11%	Aug	Oct	Dec	Feb	Apr	Jun
Basis ct/bu	125.00	125.00	130.00	125.00	120.00	115.00
Futures ct/bu	436.50	454.00	454.00	470.75	481.75	486.75
Flat Price	561.50	579.00	584.00	595.75	601.75	601.75
Rail Freight	4.73	2.03	2.03	-1.35	-0.68	1.35
Delivered Gulf	566.23	581.03	586.03	594.40	601.07	603.10
<b>Cash Carry</b>	<b>Storage Revenue ct/bu</b>					
Aug-Oct	14.80					
Aug-Dec	19.8					
Aug-Feb	28.17					
Aug-Apr	34.84					
Aug-Jun	36.87					
<b>Cash Carry</b>	<b>Monthly Storage Revenue ct/bu</b>					
Aug-Oct	7.40					
Aug-Dec	4.9					
Aug-Feb	4.69					
Aug-Apr	4.36					
Aug-Jun	3.69					

Domestic Freight				
Rail Freight	Rail Freight	Barge Freight	Barge Freight	Rail Freight
	BN Shuttle	Lower OH R.	Il. River	UP Shuttle
	\$bu/car over tariff	% of tariff	% of tariff	\$bu/car over tariff
	3700	12.00	17.30	3700
Jun '20	-100	275%	325%	-50
Jul '19	-	310%	515%	-
Aug '19	-175	315%	440%	-175
Sep '19	-150	390%	420%	-125
Oct '19	-50	440%	440%	-75
Nov '19	-50	365%	390%	-75
Dec '19	100	315%	365%	-75
Jan '20	150	300%	355%	50
Feb '20	150	295%	350%	50
Mar '20	150	290%	345%	50
Apr '20	-100	285%	340%	25
May '20	-100	280%	335%	25
Cents/Bushel Equivalent				
Jun '20	-2.70	33.00	56.23	-1.35
Jul '19	-	37.20	89.10	-
Aug '19	-4.73	37.80	76.12	-4.73
Sep '19	-4.05	46.80	72.66	-3.38
Oct '19	-1.35	52.80	76.12	-2.03
Nov '19	-1.35	43.80	67.47	-2.03
Dec '19	2.70	37.80	63.15	-2.03
Jan '20	4.05	36.00	61.42	1.35
Feb '20	4.05	35.40	60.55	1.35
Mar '20	4.05	34.80	59.69	1.35
Apr '20	-2.70	34.20	58.82	0.68
May '20	-2.70	33.60	57.96	0.68

Corn	Aug	Oct	Dec	Feb	Apr	Jun
Basis ct/bu	50.00	45.00	55.00	55.00	55.00	55.00
Futures ct/bu	417.00	427.00	427.00	436.75	440.75	444.25
Flat Price	467.00	472.00	482.00	491.75	495.75	499.25
Barge Freight	-76.12	-76.12	-63.15	-60.55	-58.82	-56.23
FOB Shipper	390.88	395.88	418.86	431.20	436.93	443.03
<b>Cash Carry</b>	<b>Storage Revenue ct/bu</b>					
Aug-Oct	5.00					
Aug-Dec	27.98					
Aug-Feb	40.32					
Aug-Apr	46.05					
Aug-Jun	52.15					
<b>Cash Carry</b>	<b>Monthly Storage Revenue ct/bu</b>					
Aug-Oct	2.50					
Aug-Dec	6.99					
Aug-Feb	6.72					
Aug-Apr	5.76					
Aug-Jun	5.21					

Soybeans	Aug	Oct	Dec	Feb	Apr	Jun
Basis ct/bu	60.00	40.00	40.00	40.00	40.00	40.00
Futures ct/bu	891.50	904.25	929.25	929.25	939.00	948.75
Flat Price	951.50	944.25	969.25	969.25	979.00	988.75
Barge Freight	-76.12	-76.12	-63.15	-60.55	-58.82	-56.23
FOB Shipper	875.38	868.13	906.11	908.70	920.18	932.53
<b>Cash Carry</b>	<b>Storage Revenue ct/bu</b>					
Aug-Oct	-7.25					
Aug-Dec	30.73					
Aug-Feb	33.32					
Aug-Apr	44.80					
Aug-Jun	57.15					
<b>Cash Carry</b>	<b>Monthly Storage Revenue ct/bu</b>					
Aug-Oct	-3.63					
Aug-Dec	7.68					
Aug-Feb	5.55					
Aug-Apr	5.60					
Aug-Jun	5.71					

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Foreign Basis and Flat Price Values FOB Vessel

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Sep-19	U	503.50	436.50	532.50	175.75	1.1190	0.6913	233.00	201.00
Dec-19	Z	508.50	454.00	543.25	180.50	1.1270	0.6931	234.50	209.50
Mar-20	H	518.00	470.75	556.25	183.75	1.1353	0.6947	235.50	213.25
May-20	K	523.25	481.75	565.25	186.25	1.1426	0.6962	228.50	215.25
Jul-20	N	524.75	486.75	573.25	183.50	1.1497	0.6975	233.25	193.50

Basis (ct/bu)		Argentine	S. Australia	S. Australia	W. Aust. APW	W. Aust.	FSU	French	German	Baltic
Shipment	Futures	11.5% KCBT	APW 10.5% CBOT	AH 11.5% CBOT	10.5% CBOT	ASW 9% CBOT	12.50% Matiff	11.50% Matiff	12.50% Matiff	12.50% Matiff
		Upriver						Rouen		
Jun	N	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-
Aug	U	-	125	158	131	117	-1	-2.00		-4.00
Sep	U	-	125	158	131	117	0	-1.00	2.00	-2.00
Oct	Z	-	124	157	130	116	-4	-3.00	-3.00	-7.00
Nov	Z	-	124	157	130	116	-2	-2.00	-1.00	-5.00
Dec	Z	71	135	157	130	116	0	-1.00	1.00	-3.00
Jan	H	60	128	150	123	109	-3	-4.00	-2.00	-6.00
Feb	H	63	128	150	123	109	-1	-3.00		-4.00
Mar	H	-	128	150	123	109	0	-2.00	2.00	-2.00
Apr	K	-	-	-	-	-	-	-	-	-
May	K	-	-	-	-	-	-	-	-	-
Flat Price FOB Vessel (USD/mt)		Argentine	S. Australia	S. Australia	W. Aust. APW	W. Aust.	FSU	French	German	Baltic
Shipment	Futures	11.5% KCBT	APW 10.5% CBOT	AH 11.5% CBOT	10.5% CBOT	ASW 9% CBOT	12.50% Matiff	11.50% Matiff	12.50% Matiff	12.50% Matiff
Jun	N	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-
Aug	U	-	231.00	243.00	233.00	228.00	195.00	194.43	196.66	192.19
Sep	U	-	231.00	243.00	233.00	228.00	197.00	195.55	198.90	194.43
Oct	Z	-	232.50	244.50	234.50	229.50	199.00	200.03	200.03	195.53
Nov	Z	-	232.50	244.50	234.50	229.50	201.00	201.16	202.29	197.78
Dec	Z	193.00	236.50	244.50	234.50	229.50	203.00	202.29	204.54	200.03
Jan	H	195.00	237.50	245.50	235.50	230.50	205.00	204.06	206.33	201.79
Feb	H	196.00	237.50	245.50	235.50	230.50	207.00	205.20	208.60	204.06
Mar	H	-	237.50	245.50	235.50	230.50	209.00	206.33	210.87	206.33
Apr	K	-	-	-	-	-	-	-	-	-
May	K	-	-	-	-	-	-	-	-	-

Basis (ct/bu)		Canada T. B.	St. Law	Vancouver	Vancouver	Vancouver
Shipment	Futures	13.50% MGEX	#2, 13.5% MGEX	Canada #2 13.0%	Canada #2 13.5%	Canada #1 13.8%
				12.5% -10		15.00
				-10.00		
Jun	N	-	-	-	-	-
Jul	N	-	-	-	-	-
Aug	U	-	-	-	-	-
Sep	U	-	-	-	-	-
Oct	Z	-	80.00	75.00	85.00	100.00
Nov	Z	-	85.00	80.00	90.00	105.00
Dec	Z	-	90.00	85.00	95.00	110.00
Apr	K	-	-	-	-	-
May	N	-	-	-	-	-
Flat Price FOB Vessel (USD/mt)		Canada T. B.	St. Law	Vancouver	Vancouver	Vancouver
Shipment	Futures	13.00% MGEX	#2, 13% MGEX	Canada #2 13.0%	Canada #2 13.5%	Canada #1 13.8%
Jun	N	-	-	-	-	-
Jul	N	-	-	-	-	-
Aug	U	-	-	-	-	-
Sep	U	-	-	-	-	-
Oct	Z	-	229.01	227.17	230.84	236.35
Nov	Z	-	230.84	229.01	232.68	238.19
Dec	Z	-	232.68	230.84	234.52	240.03
Apr	K	-	-	-	-	-
May	N	-	-	-	-	-

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Based upon 8 kmt/day load & 5 kmt/day unload, 3.75% commission, SHEX EIU

Destination Country (Port) (Vessel Size)	Freight Spread Using Houston As Baseline											
	Origin (Port)											
	S. Aust. (Adelaide)	W. Aust. (Kwinana)	PNW (Kalama)	Gulf (New Orleans)	Gulf (Houston)	Canada (Vancouver)	Canada (Montreal)	Russia (Novo)	Germany (Hamburg)	Poland (Gdansk)	France (La Pallice)	Argentina (UP+BB)
Indonesia (Jakarta) (50 kmt)	(30)	(32)	(12)	1	0	(23)	0	(11)	(6)	(6)	(8)	(11)
Brazil (Fortaleza) (30 kmt)	19	16	6	1	0	6	5	0	(1)	(1)	(3)	0
Egypt (Damietta) (60 kmt)	2	0	6	1	0	6	0	(12)	(7)	(7)	(8)	3
Saudi Arabia (Jeddah) (60 kmt)	(11)	(14)	(3)	1	0	(3)	0	-	(6)	(6)	(8)	-
Algeria (Algiers) (30 kmt, 3 kmt/day unlo	-	-	-	1	0	-	-	-	(10)	(9)	(12)	6
Morocco (Casa Blanca) (30 kmt)	-	-	-	1	0	-	-	(9)	(9)	(9)	(12)	5
Nigeria (Lagos) (40 kmt)	(2)	(5)	3	1	0	3	2	(4)	(4)	(4)	(6)	(1)
Kenya (Mombasa) (40 kmt)	(15)	(17)	3	1	0	1	1	(9)	(7)	(7)	(9)	(5)

Destination Protein/Class FOB	C&F Advantage/Disadvantage															
	Origin															
	S. Aust.	W. Aust.	W. Aust.	W. Aust.	PNW	PNW	PNW	Gulf	Vancouver	Montreal	Russia	Germany	Poland	France	Argentina	
	APW	AH2	APW	ASW	SWW	HRW	HRS	SRW	11.0% HRW	13.5%	13.5%	12.5%	12.5%	12.5%	11%	11.5%
	231	243	233	228	230	217	229	216	211	231	229	197	199	194	196	-
Indonesia (Jakarta) (50 kmt)	-10	0	-10	-15	7	-6	6	6	0	-3	18	-25	-18	-22	-23	#VALUE!
Brazil (Fortaleza) (30 kmt)								6	0	26	23	-14				#VALUE!
Egypt (Damietta) (60 kmt)					25	12		6	0			-26	-19	-23	-23	#VALUE!
Saudi Arabia (Jeddah) (60 kmt)	9	18	8	3	16	3	15		0	17	18		-18	-22		
Algeria (Algiers) (30 kmt, 3 kmt/day unload)									0				-22	-25	-27	#VALUE!
Morocco (Casa Blanca) (30 kmt)									0			-23	-21	-25	-27	#VALUE!
Nigeria (Lagos) (40 kmt)	18	27	17	12					0	23	20	-18	-16	-20		#VALUE!
Kenya (Mombasa) (40 kmt)	5	15	5	0					0	21	19	-23	-19	-23		#VALUE!

World Wheat FOB Comparisons										
Origin	<u>Russian</u>	<u>German</u>	<u>Baltic</u>	<u>Argentina</u>	<u>HRW</u>	<u>HRW</u>	<u>HRW</u>	<u>French</u>	<u>UK</u>	<u>SRW</u>
Protein (dmb)	12.50%	12.50%	12.50%	11.50%	12.50%	11.00%	10.20%	11.00%	11.00%	10.20%
Protein (12% mb)	11.00%	11.00%	11.00%	10.12%	11.00%	9.68%	9.00%	9.68%	9.68%	9.00%
Aug	\$195	\$197	\$192	-	\$206	\$203	\$202	\$194	\$192	-
Sep	\$197	\$199	\$194	-	\$208	\$204	\$203	\$196	\$194	\$218
Oct	\$199	\$200	\$196	-	\$211	\$207	\$206	\$200	\$195	\$216
Nov	\$201	\$202	\$198	-	\$215	\$211	\$210	\$201	\$197	\$218

World Wheat FOB Comparisons										
Origin	<u>APW</u>	<u>AH2</u>	<u>ASW</u>	<u>HRW PNW</u>	<u>HRW PNW</u>	<u>SWW</u>	<u>NS</u>	<u>NS</u>	<u>CWRS</u>	<u>CWRS</u>
Protein (dmb)	11.80%	12.90%	10.10%	12.00%	13.10%	12.00%	15.30%	15.90%	15.50%	15.90%
Protein (local)	10.50%	11.50%	9.00%	10.50%	11.50%	10.50%	13.50%	14.00%	13.50%	13.80%
Aug	\$233	\$243	\$228	\$212	\$216	\$230	\$227	\$227	-	-
Sep	\$233	\$243	\$228	\$214	\$217	\$230	\$229	\$229	-	-
Oct	\$235	\$245	\$230	\$216	\$220	\$231	\$231	\$231	\$231	\$236
Nov	\$235	\$245	\$230	\$218	\$222	\$232	\$233	\$233	\$233	\$238

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Price=USD			
Spread Analysis			
Delivery Month	U	Z	H
Starts	1-Sep	1-Dec	1-Mar
Ends	1-Dec	1-Mar	1-May
Total Days	91	91	61
<b>Corn Closing Price</b>	<b>417.00</b>	<b>427.00</b>	<b>436.75</b>
Storage rate	0.165	0.265	0.265
Total Storage	15.02	24.12	16.17
Total Interest	4.57	4.68	3.21
Full Carry	19.58	28.79	19.37
Spread Close	-10.00	-9.75	-4.00
% Full Carry	51%	34%	21%
<b>CME W Closing Price</b>	<b>503.50</b>	<b>508.50</b>	<b>518.00</b>
Storage rate	0.165	0.165	0.165
Total Storage	15.02	15.02	10.07
Total Interest	5.51	5.57	3.80
Full Carry	20.53	20.58	13.87
Spread Close	-5.00	-9.50	-5.3
% Full Carry	24%	46%	38%
<b>KCBT Closing Price</b>	<b>436.50</b>	<b>454.00</b>	<b>470.75</b>
Storage rate	0.265	0.265	0.265
Total Storage	24.12	24.12	16.17
Total Interest	4.78	4.97	3.46
Full Carry	28.89	29.09	19.62
Spread Close	-17.50	-16.75	-11.00
% Full Carry	61%	58%	56%
<b>MGEX Closing Price</b>	<b>532.50</b>	<b>543.25</b>	<b>556.25</b>
Storage rate	0.233	0.233	0.233
Total Storage	21.20	21.20	14.21
Total Interest	5.83	5.95	4.08
Full Carry	27.03	27.15	18.30
Spread Close	-10.75	-13.00	-9.00
% Full Carry	40%	48%	49%

VSR INCREASES						
CME VSR (ct/bu)	Spread	U-Z	Z-H	H-K	K-N	N-U
<b>Futures Close Price</b>	<b>Days</b>	<b>503.50</b>	<b>508.50</b>	<b>518.00</b>	<b>523.25</b>	<b>524.75</b>
Base Storage	0.165	15.02	15.02	10.07	10.07	10.23
U-Z (increase .10)	91	7.30	9.10	6.10	6.10	6.20
Z-H (increase .10)	91		7.30	6.10	6.10	6.20
H-K (increase .10)	61			4.30	6.10	6.20
K-N (increase .10)	61				4.30	6.20
N-U (increase .10)	62					4.40
Total Storage		22.32	31.42	26.57	32.67	39.43
Interest Charge	4.33%	5.51	5.57	3.80	3.84	3.91
Full Carry B4 VSR		20.53	20.58	13.87	13.91	14.14
Closing Board Spread		5.00	9.50	5.25	1.50	6.25
Closing Spread % FC		24%	46%	38%	11%	44%

VSR INCREASES						
KCBT VSR (ct/bu)	Spread	U-Z	Z-H	H-K	K-N	N-U
<b>Futures Close Price</b>	<b>Days</b>	<b>436.50</b>	<b>454.00</b>	<b>470.75</b>	<b>481.75</b>	<b>486.75</b>
Base Storage	0.265	24.12	24.12	16.17	16.17	16.43
U-Z (increase .10)	91	7.30	9.10	6.10	6.10	6.20
Z-H (increase .10)	91		7.30	6.10	6.10	6.20
H-K (increase .10)	61			4.30	6.10	6.20
K-N (increase .10)	61				4.30	6.20
N-U (increase .10)	62					4.40
Total Storage		31.42	40.52	32.67	38.77	45.63
Interest Charge	4.33%	4.78	4.97	3.46	3.54	3.63
Full Carry B4 VSR		28.89	29.09	19.62	19.70	20.06
Closing Board Spread		17.50	16.75	11.00	5.00	13.00
Closing Spread % FC		61%	58%	56%	25%	65%

VSR DECREASES						
CME VSR (ct/bu)	Spread	U-Z	Z-H	H-K	K-N	N-U
<b>Futures Close Price</b>	<b>Days</b>	<b>503.50</b>	<b>508.50</b>	<b>518.00</b>	<b>523.25</b>	<b>524.75</b>
Base Storage	0.165	15.02	15.02	10.07	10.07	10.23
K-N (decrease .10)	91	*	*	*	*	*
N-U (decrease .10)	91		*	*	*	*
U-Z (decrease .10)	61			*	*	*
Z-H (decrease .10)	61				*	*
H-K (decrease .10)	62					*
Total Storage		15.02	15.02	10.07	10.07	10.23
Interest Charge	4.33%	5.51	5.57	3.80	3.84	3.91
Full Carry B4 VSR		20.53	20.58	13.87	13.91	14.14
Closing Board Spread		5.00	9.50	5.25	1.50	6.25
Closing Spread % FC		24%	46%	38%	11%	44%

\* VSR could not decrease any further because it would already be at the minimum storage rate of 0.165 ct/bu/day

531.00

499.75

VSR DECREASES						
KCBT VSR (ct/bu)	Spread	U-Z	Z-H	H-K	K-N	N-U
<b>Futures Close Price</b>	<b>Days</b>	<b>436.50</b>	<b>454.00</b>	<b>470.75</b>	<b>481.75</b>	<b>486.75</b>
Base Storage	0.265	24.12	24.12	16.17	16.17	16.43
K-N (decrease .10)	91	-7.30	-9.10	-6.10	-6.10	-6.20
N-U (decrease .10)	91		*	*	*	*
U-Z (decrease .10)	61			*	*	*
Z-H (decrease .10)	61				*	*
H-K (decrease .10)	62					*
Total Storage		16.82	15.02	10.07	10.07	10.23
Interest Charge	4.33%	4.78	4.97	3.46	3.54	3.63
Full Carry B4 VSR		28.89	29.09	19.62	19.70	20.06
Closing Board Spread		17.50	16.75	11.00	5.00	13.00
Closing Spread % FC		61%	58%	56%	25%	65%

\* VSR could not decrease any further because it would already be at the minimum storage rate of 0.165 ct/bu/day



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**Cascade Commodity Consulting Company**

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**Wheat vs Corn Feeding Relationship**

	<b>SW Kansas</b>		<b>Texas Panhandle</b>		<b>North Carolina</b>	
	<b>HRW</b>	<b>Corn</b>	<b>HRW</b>	<b>Corn</b>	<b>SRW</b>	<b>Corn</b>
Basis	-45.00	-5.00	-9.50	48.00	-9.50	87.00
Futures	436.50	417.00	436.50	417.00	503.50	417.00
Flat Price	391.50	412.00	427.00	465.00	494.00	504.00
Flat Price (mt)	143.85	163.44	156.90	184.47	181.51	199.94
Wheat/Corn	<b>88%</b>		<b>85%</b>		<b>91%</b>	

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Price=USD	KCBT Delivery Calculations (BN Freight)								
	Taker Gulf (24-48 heavy cars)			Delivered Gulf (Shuttle/Heavy)			Delivered KC (1-23 heavy cars)		
11.0% Protein	Hutchinson	Salina	Wichita	Hutchinson	Salina	Wichita	Hutchinson	Salina	Wichita
Delivery Differential	-9.00	-12.00	-6.00	-9.00	-12.00	-6.00	-9.00	-12.00	-6.00
Protein Discount for 10.5% (-10 ct)									
Del. Loadout Charge	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Misc. Costs	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Delivery Value	1.00	-2.00	4.00	1.00	-2.00	4.00	1.00	-2.00	4.00
<b>Tariff Rate (\$/car)</b>	<b>5887.00</b>	<b>5990.00</b>	<b>5792.00</b>	<b>4454.00</b>	<b>4555.00</b>	<b>4361.00</b>	<b>4457.00</b>	<b>4473.00</b>	<b>4450.00</b>
Tariff Rate (c/bu)	159.11	161.89	156.54	120.38	123.11	117.86	120.46	120.89	120.27
<b>Mileage Houston, TX</b>	<b>688.00</b>	<b>761.00</b>	<b>632.00</b>	<b>688.00</b>	<b>761.00</b>	<b>632.00</b>	-	-	-
Rail Cost (c/bu)	0.00	0.00	0.00	-3.38	-3.38	-3.38	0.00	0.00	0.00
<b>Freight Cost (c/bu)</b>	<b>159.11</b>	<b>161.89</b>	<b>156.54</b>	<b>117.00</b>	<b>119.73</b>	<b>114.49</b>	<b>120.46</b>	<b>120.89</b>	<b>120.27</b>
Delivered Value	160.11	159.89	160.54	118.00	117.73	118.49	121.46	118.89	124.27
<b>Delivered bid (10.5% protein)</b>	<b>125.00</b>	<b>125.00</b>	<b>125.00</b>	<b>125.00</b>	<b>125.00</b>	<b>125.00</b>	<b>120.00</b>	<b>120.00</b>	<b>120.00</b>
<b>Cash vs. Delivery</b>	<b>-35.11</b>	<b>-34.89</b>	<b>-35.54</b>	<b>7.00</b>	<b>7.27</b>	<b>6.51</b>	<b>-1.46</b>	<b>1.11</b>	<b>-4.27</b>
<b># of Days in Storage</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>
Storage Cost	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22
<b>Futures</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>	<b>436.50</b>
Interest Cost	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
TTL Est. Carry Cost	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84	9.84
<b>Cash vs. Delivery</b>	<b>-44.95</b>	<b>-44.74</b>	<b>-45.38</b>	<b>-2.84</b>	<b>-2.57</b>	<b>-3.33</b>	<b>-11.30</b>	<b>-8.74</b>	<b>-14.11</b>

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CBOT Wheat Delivery Calculations

<i>Price=USD</i>	Ohio River	MTCT	Chicago (river)	St. Louis	Chicago (domestic)	Toledo / Bellevue	NW OH
Delivery Differential	0.00	20.00	0.00	10.00	0.00	0.00	-10.00
Del. Loadout Charge	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Misc. Costs	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Delivery Value	8.00	28.00	8.00	18.00	8.00	8.00	-2.00
<b>Barge Freight</b>	<b>390%</b>	<b>335%</b>	<b>420%</b>	<b>340%</b>	NA	NA	NA
<b>Tarriff</b>	<b>12.00</b>	<b>9.40</b>	<b>17.30</b>	<b>12.00</b>	NA	NA	NA
Barge Freight (c/bu)/ Lakes	<b>46.80</b>	<b>31.49</b>	<b>72.66</b>	<b>40.80</b>	NA	NA	NA
Delivered Value	54.80	59.49	80.66	58.80	8.00	8.00	-2.00
<b>Delivered Gulf / FOB Elevator</b>	<b>70.00</b>	<b>70.00</b>	<b>70.00</b>	<b>70.00</b>	<b>20.00</b>	<b>35.00</b>	<b>35.00</b>
Cash vs. Delivery	15.20	10.51	-10.66	11.20	12.00	27.00	37.00
<b># of Days in Storage</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>
Storage Cost	5.12	5.12	5.12	5.12	5.12	5.12	5.12
<b>Futures</b>	<b>503.50</b>	<b>503.50</b>	<b>503.50</b>	<b>503.50</b>	<b>503.50</b>	<b>503.50</b>	<b>503.50</b>
Interest Cost	1.88	1.88	1.88	1.88	1.88	1.88	1.88
TTL Est. Carry Cost	6.99	6.99	6.99	6.99	6.99	6.99	6.99
Cash vs. Delivery	8.21	3.52	-17.65	4.21	5.01	20.01	30.01

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MGEX Delivery Calculations

Price=USD

	Delivered Chicago Gateway		Duluth Replacement*
<b>13.5% Protein</b>	Duluth (BNSF) 110 cars	Duluth (CP) Single/25 cars	Duluth (CP) DETS (FOB Dul/Sup)*
Delivery Differential	3.00	3.00	3.00
Protein discount for 13.0% (-3 ct)	-3.00	-3.00	-3.00
Del. Loadout Charge	8.00	8.00	8.00
Test Wt	2.00	2.00	2.00
Misc. Costs	2.00	2.00	2.00
Delivery Value	12.000	12.000	12.000
<b>Tariff Rate</b>	<b>2283.00</b>	<b>2299.00</b>	<b>N/A</b>
Tariff Rate (c/bu)	61.70	62.14	0.00
Rail Cost	-4.05	-3.38	N/A
Freight Cost (c/bu) (Dul -18.25)	57.65	58.76	-35.00
Delivered Value	69.65	70.76	25.00
<b>Del. Chicago Gateway Bid</b>	<b>70.00</b>	<b>70.00</b>	<b>60.00</b>
Cash vs. Delivery	0.35	-0.76	13.00
<b># of Days in Storage</b>	<b>31.00</b>	<b>31.00</b>	<b>31.00</b>
Storage Cost	7.00	7.00	7.00
<b>Futures</b>	<b>532.50</b>	<b>532.50</b>	<b>532.50</b>
Interest Cost	1.99	1.99	N/A
TTL Est. Carry Cost	8.99	8.99	N/A
Cash vs. Delivery	-8.63	-9.74	N/A

\* Duluth replacement = Chicago Gateway Delivery less \$1,300/car (-35.00 ct/bu) for single cars  
 FOB Lakes = Duluth replacement + Elevation

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Price=USD

### CBOT Corn Delivery Calculations

<b>Illinois River</b>	<b>Zone 1</b>	<b>Zone 2</b>	<b>Zone 3</b>	<b>Zone 4</b>
Delivery Differential	0.00	2.00	2.50	3.00
Del. Loadout Charge	6.00	6.00	6.00	6.00
Misc. Costs	0.00	0.00	0.00	0.00
Delivery Value	6.00	8.00	8.50	9.00
<b>Barge Rate</b>	<b>420%</b>	<b>420%</b>	<b>420%</b>	<b>420%</b>
Tarriff	16.20	14.70	14.25	13.50
<b>Barge Freight (ct/bu)</b>	<b>68.04</b>	<b>61.74</b>	<b>59.85</b>	<b>56.70</b>
Delivered Value	74.04	69.74	68.35	65.70
<b>Delivered Bid</b>	<b>50.00</b>	<b>50.00</b>	<b>50.00</b>	<b>50.00</b>
Cash vs. Delivery	-24.04	-19.74	-18.35	-15.70
<b># of Days in Storage</b>	<b>31.00</b>	<b>31.00</b>	<b>31.00</b>	<b>31.00</b>
Storage Cost	5.00	5.00	5.00	5.00
<b>Futures</b>	<b>417.00</b>	<b>417.00</b>	<b>417.00</b>	<b>417.00</b>
Interest Cost	1.556	1.556	1.556	1.556
TTL Est. Carry Cost	6.56	6.56	6.56	6.56
Cash vs. Delivery	-30.60	-26.30	-24.91	-22.26

*All information is provided as a reference only and not intended to be used for trading.*

### Wheat Stocks as of July 5, 2019

Date	5-Jul	Wk Ago	Change	YR Ago
KCBT	96,399	88,583	7,816	121,961
CBOT	45,054	43,839	1,215	78,437
MGEX	13,397	12,895	502	15,353

### KCBT Wheat Stocks

Date	5-Jul	Wk Ago	Change	YR Ago
Hutchinson	27,375	25,061	2,314	28,351
KC	8,513	8,468	45	11,034
Salina	27,704	23,607	4,097	37,917
Wichita	32,807	31,447	1,360	44,659
<b>Total</b>	<b>96,399</b>	<b>88,583</b>	<b>7,816</b>	<b>121,961</b>

### CBOT Wheat Stocks

Date	5-Jul	Wk Ago	Change	YR Ago
Chicago	3,966	4,438	(472)	8,793
Miss. River	6,000	5,545	455	16,630
NW Ohio	7,516	7,558	(42)	10,946
Ohio River	5,203	4,584	619	15,941
St. Louis	1,605	1,288	317	3,454
Toledo	20,764	20,426	338	22,673
<b>Total</b>	<b>45,054</b>	<b>43,839</b>	<b>1,215</b>	<b>78,437</b>
<b>Non-Deliver</b>	<b>5,599</b>	<b>4,990</b>	<b>609</b>	<b>7,454</b>
<b>Net-Deliver</b>	<b>39,455</b>	<b>38,849</b>	<b>606</b>	<b>70,983</b>

### MGEX Wheat Stocks

Date	5-Jul	Wk Ago	Change	YR Ago
Mpls	1,376	1,372	4	1,128
Duluth	12,021	11,523	498	14,225
<b>Total</b>	<b>13,397</b>	<b>12,895</b>	<b>502</b>	<b>15,353</b>

7/25/2019

**CHICAGO SRW WHEAT VSR**

**Variable Storage Rate September 2019 - December 2019 Calculation Period**

September 2019 First Delivery Day 9/3/2019  
 December 2019 First Delivery Day 12/2/2019  
 Number of Carry Days 90  
 Storage Rate Used in Calculation \$0.00165/bu/day  
 Running Average Percent of Full Carry 50.19%

Date	Sep 2019 Contract Price	Dec 2019 Contract Price	3M LIBOR Plus 200 Basis Points	Financial Full Carry	Sep19-Dec19 Spread	Sep-Dec Spread as % of Full Carry
7/19/2019	\$5.0250	\$5.1350	4.25938	0.202008	0.1100	54.5%
7/22/2019	\$4.8725	\$4.9900	4.28275	0.200669	0.1175	58.6%
7/23/2019	\$4.8725	\$4.9825	4.27550	0.200581	0.1100	54.8%
7/24/2019	\$4.9775	\$5.0675	4.26663	0.201593	0.0900	44.6%
7/25/2019	\$4.9950	\$5.0725	4.25575	0.201644	0.0775	38.4%
7/26/2019				0.148500	0.0000	0.0%
7/29/2019				0.148500	0.0000	0.0%
7/30/2019				0.148500	0.0000	0.0%
7/31/2019				0.148500	0.0000	0.0%
8/1/2019				0.148500	0.0000	0.0%
8/2/2019				0.148500	0.0000	0.0%
8/5/2019				0.148500	0.0000	0.0%
8/6/2019				0.148500	0.0000	0.0%
8/7/2019				0.148500	0.0000	0.0%
8/8/2019				0.148500	0.0000	0.0%
8/9/2019				0.148500	0.0000	0.0%
8/12/2019				0.148500	0.0000	0.0%
8/13/2019				0.148500	0.0000	0.0%
8/14/2019				0.148500	0.0000	0.0%
8/15/2019				0.148500	0.0000	0.0%
8/16/2019				0.148500	0.0000	0.0%
8/19/2019				0.148500	0.0000	0.0%
8/20/2019				0.148500	0.0000	0.0%
8/21/2019				0.148500	0.0000	0.0%
8/22/2019				0.148500	0.0000	0.0%
8/23/2019				0.148500	0.0000	0.0%

**Results:**

Current Maximum Premium (Storage) Charge: \$0.00165/bu/day

If the Running Average Percent of Full Carry on 8/23/2019 is 80% or greater, the Maximum Premium (Storage) Charge will increase to \$0.00265 on 9/19/2019

If the Running Average Percent of Full Carry on 8/23/2019 is greater than 50% and less than 80%, the Maximum Premium (Storage) Charge will remain at \$0.00165/bu/day on 9/19/2019

If the Running Average Percent of Full Carry on 8/23/2019 is 50% or Less, the Maximum Premium (Storage) Charge will remain at \$0.00165/bu/day on 9/19/2019

7/26/2019

**KANSAS CITY HRW WHEAT VSR**

**Variable Storage Rate September 2019 - December 2019 Calculation Period**

September 2019 First Delivery Day 9/3/2019  
December 2019 First Delivery Day 12/2/2019  
Number of Carry Days 90  
Storage Rate Used in Calculation \$0.00265/bu/day  
Running Average Percent of Full Carry 63.52%

Date	Sep 2019 Contract Price	Dec 2019 Contract Price	3M LIBOR Plus 200 Basis Points	Financial Full Carry	Sep19-Dec19 Spread	Sep-Dec Spread as % of Full Carry
7/19/2019	\$4.4000	\$4.5975	4.25938	0.285353	0.1975	69.2%
7/22/2019	\$4.2925	\$4.4850	4.28275	0.284459	0.1925	67.7%
7/23/2019	\$4.3150	\$4.4925	4.27550	0.284622	0.1775	62.4%
7/24/2019	\$4.3950	\$4.5575	4.26663	0.285380	0.1625	56.9%
7/25/2019	\$4.3750	\$4.5500	4.25575	0.285047	0.1750	61.4%
7/26/2019				0.238500	0.0000	0.0%
7/29/2019				0.238500	0.0000	0.0%
7/30/2019				0.238500	0.0000	0.0%
7/31/2019				0.238500	0.0000	0.0%
8/1/2019				0.238500	0.0000	0.0%
8/2/2019				0.238500	0.0000	0.0%
8/5/2019				0.238500	0.0000	0.0%
8/6/2019				0.238500	0.0000	0.0%
8/7/2019				0.238500	0.0000	0.0%
8/8/2019				0.238500	0.0000	0.0%
8/9/2019				0.238500	0.0000	0.0%
8/12/2019				0.238500	0.0000	0.0%
8/13/2019				0.238500	0.0000	0.0%
8/14/2019				0.238500	0.0000	0.0%
8/15/2019				0.238500	0.0000	0.0%
8/16/2019				0.238500	0.0000	0.0%
8/19/2019				0.238500	0.0000	0.0%
8/20/2019				0.238500	0.0000	0.0%
8/21/2019				0.238500	0.0000	0.0%
8/22/2019				0.238500	0.0000	0.0%
8/23/2019				0.238500	0.0000	0.0%

**Results:**

Current Maximum Premium (Storage) Charge: \$0.00265/bu/day

If the Running Average Percent of Full Carry on 8/23/2019 is 80% or greater, the Maximum Premium (Storage) Charge will increase to \$0.00365 on 9/19/2019

If the Running Average Percent of Full Carry on 8/23/2019 is greater than 50% and less than 80%, the Maximum Premium (Storage) Charge will remain at \$0.00265/bu/day on 9/19/2019

If the Running Average Percent of Full Carry on 8/23/2019 is 50% or Less, the Maximum Premium (Storage) Charge will decline to \$0.00165/bu/day on 9/19/2019