

DATE 5-Nov-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
Sep-20	U	535.75	463.75	569.75	180.25	1.128	398.75	0.6936	970.00	244.00	199.50	1.90
Dec-19	Z	515.25	428.50	526.00	177.75	1.109	381.75	0.6899	921.75	241.75	207.00	
Mar-20	H	520.25	439.50	542.25	180.50	1.116	391.75	0.6914	947.25	243.00	211.75	
May-20	K	524.50	447.50	552.75	182.75	1.122	398.50	0.6926	959.00	243.00	214.00	
Jul-20	N	529.00	455.00	561.75	180.25	1.128	404.75	0.6936	969.25	244.00	199.00	

Gulf Export		398.75				970					
Basis (ct/bu)		HRW FOB Gulf				HRS		SRW	LAKES		
		Ords	11.0%	11.5%	12.0%	13.0%	13.5%		13%	HRS	14%
Old Crop		-45.00	-40.00	-20.00		TX Gulf -0 ct/bu					
New Crop		-45.00	-40.00	-20.00		-5.00 14%+8			0.00		8.00
Shipment	Futures	BASIS NOLA									
Jun	N	130.00	135.00	155.00	175.00	-	-	-	-	-	-
Jul	N	130.00	135.00	155.00	175.00	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-	-
Dec	Z	140.00	145.00	165.00	185.00	180.00	185.00	110.00	-	-	-
Jan	H	135.00	140.00	160.00	180.00	180.00	185.00	110.00	-	-	-
Feb	H	135.00	140.00	160.00	180.00	185.00	190.00	110.00	-	-	-
Mar	H	135.00	140.00	160.00	180.00	185.00	190.00	115.00	-	-	-
Apr	K	135.00	140.00	160.00	180.00	-	-	-	-	-	-
May	K	135.00	140.00	160.00	180.00	-	-	-	-	-	-
Flat Price FOB Vessel		HRW				HRS		SRW	LAKES		
Shipment	Futures	Ords	11.0%	11.5%	12.0%	13.0%	13.5%		13%	HRS	14%
Jun	N	214.95	216.79	224.14	231.49	-	-	-	-	-	-
Jul	N	214.95	216.79	224.14	231.49	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-	-
Dec	Z	208.89	210.73	218.07	225.42	259.41	261.25	229.74	-	-	-
Jan	H	211.09	212.93	220.28	227.63	265.38	267.22	231.58	-	-	-
Feb	H	211.09	212.93	220.28	227.63	267.22	269.06	231.58	-	-	-
Mar	H	211.09	212.93	220.28	227.63	267.22	269.06	233.41	-	-	-
Apr	K	214.03	215.87	223.22	230.57	-	-	-	-	-	-
May	K	214.03	215.87	223.22	230.57	-	-	-	-	-	-

		PNW CASH BASIS FOB (S&T+S&F) US c/bu							CANADA CASH BASIS		
Basis (ct/bu)		HRW				NS 50 DHV, 300 FN			SWW	Vancouver	Vancouver
		10.50%	11.0%	11.5%	12.0%	13%	13.5%	14.0%	Max 10.5% pro	Canada	Canada
New Crop		-15.00	-10.00		10.00	-15.00	-10.00	+15 14.5%		#2 13.5%	#2 13.8%
Old Crop										275 FN	
Shipment	Futures	50 ct/bu prem DNS									
Jun	N	-	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-	-
Dec	Z	175.00	180.00	190.00	200.00	175.00	180.00	190.00	105	150.00	190.00
Jan	H	170.00	175.00	185.00	195.00	165.00	170.00	180.00	105	135.00	175.00
Feb	H	170.00	175.00	185.00	195.00	170.00	175.00	185.00	110	135.00	175.00
Mar	H	170.00	175.00	185.00	195.00	170.00	175.00	185.00	115	135.00	175.00
Apr	K	-	-	-	-	-	-	-	-	-	-
May	K	-	-	-	-	-	-	-	-	-	-
Flat Price FOB Vessel (USD/mt)		HRW				HRS			SWW	Vancouver	Vancouver
		10.50%	11.0%	11.5%	12.0%	13%	13.5%	14%		Canada	Canada
Shipment	Futures	#2 13.5%									
Jun	N	-	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-	-
Dec	Z	221.75	223.59	227.26	230.93	257.57	259.41	263.08	228	248.39	263.08
Jan	H	223.95	225.79	229.46	233.14	259.87	261.71	265.38	230	248.85	263.54
Feb	H	223.95	225.79	229.46	233.14	261.71	263.54	267.22	231	248.85	263.54
Mar	H	223.95	225.79	229.46	233.14	261.71	263.54	267.22	233	248.85	263.54
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%	J/F/M	DNS 14%	HRW 14%	DNS 13.5%	HRW 13%	DNS 13%	HRW 12%
Basis	190.00	215.00	160.00	215.00	155.00	150.00	Basis	180.00	210.00	175.00	205.00	170.00	160.00
Futures	526.00	428.50	526.00	428.50	526.00	428.50	Futures	542.25	439.50	542.25	439.50	542.25	439.50
Del Chicago	716.00	643.50	686.00	643.50	681.00	578.50	Del Chicago	722.25	649.50	717.25	644.50	712.25	599.50

Spring Wheat + HRW Milling Blend						
14% HRS Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	185	542.25	727.25	2.5	683.61	141.36
11.5% HRW	135	439.50	574.50	1		
14% HRS Comparison	180	542.25	722.25			
Blended Discount (ct/bu)	38.64					

14% HRS Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	185	542.25	727.25	3	685.31	143.06
11.0% HRW	120	439.50	559.50	1		
14% HRS Comparison	180	542.25	722.25			
Blended Discount (ct/bu)	36.94					

14% HRS Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
15% HRS	185	542.25	727.25	4	691.70	149.45
10.0% HRW	110	439.50	549.50	1		
14% HRS Comparison	180	542.25	722.25			
Blended Discount (ct/bu)	30.55					

13% HRS Protein Blend (Western Mills)						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
14% HRS	180	542.25	722.25	1.5	663.15	120.90
11.5% HRW	135	439.50	574.50	1		
13% HRS Comparison	170	542.25	712.25			
Blended Discount (ct/bu)	49.10					

13% HRS Protein Blend (Eastern Mills)						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis MW
14% HRS	180	542.25	722.25	2	668.00	125.75
11.0% HRW	120	439.50	559.50	1		
13% HRS Comparison	170	542.25	712.25			
Blended Discount (ct/bu)	44.25					

12.25% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
15% HRS	185	542.25	727.25	1	629.49	189.99
10.0% HRW	110	439.50	549.50	1.2		
12.25% HRW Comparison	165	439.50	604.50			
Blended Discount (ct/bu)	-24.99					

12.0% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
14% HRS	180	542.25	722.25	1	613.75	174.25
11.0% HRW	120	439.50	559.50	2		
12.0% HRW Comparison	160	439.50	599.50			
Blended Discount (ct/bu)	-14.25					

12.0% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
13.5% HRS	175	542.25	717.25	1	622.60	183.10
11.0% HRW	120	439.50	559.50	1.5		
12.0% HRW Comparison	160	439.50	599.50			
Blended Discount (ct/bu)	-23.10					

11.5% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
14% HRS	180	542.25	722.25	1	586.63	147.13
11.0% HRW	120	439.50	559.50	5		
11.5% HRW Comparison	135	439.50	574.50			
Blended Discount (ct/bu)	-12.13					

11.5% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
12.0% HRW	160	439.50	599.50	3	587.00	147.50
10.0% HRW	110	439.50	549.50	1		
11.5% HRW Comparison	135	439.50	574.50			
Blended Discount (ct/bu)	-12.50					

11.0% HRW Protein Blend						
	Spot Basis	Futures	Flat Price	Blend	Blended Price	Basis KW
12.0% HRW	160	439.50	599.50	1	574.50	135.00
10.0% HRW	110	439.50	549.50	1		
11.0% HRW Comparison	120	439.50	559.50			
Blended Discount (ct/bu)	-15.00					

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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-20	U	535.75	463.75	569.75	180.25	1.13	398.75	970.00
Dec-19	Z	515.25	428.50	526.00	177.75	1.11	381.75	921.75
Mar-20	H	520.25	439.50	542.25	180.50	1.12	391.75	947.25
May-20	K	524.50	447.50	552.75	182.75	1.12	398.50	959.00
Jul-20	N	529.00	455.00	561.75	180.25	1.13	404.75	969.25

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		
Nov/Dec	Z	55.00	100.00	60.00	Nov/Dec	Z	95.00	95.00	120.00
J/F/M	H	55.00	100.00	55.00	J/F/M	H	95.00	95.00	120.00
A/M	K	55.00	100.00	55.00	A/M	K	95.00	95.00	120.00
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
Nov/Dec	Z	171.94	189.66	360.73	Nov/Dec	Z	187.69	187.69	382.78
J/F/M	H	175.88	193.59	368.26	J/F/M	H	191.62	191.62	392.15
A/M	K	178.53	196.25	372.58	A/M	K	194.28	194.28	396.46

Cash and Carrying Charges

BNSF Rail: Cash Carrying Charges to Warehousemen						
HRW 11%	Nov	Jan	Mar	May	Jul	Sep
Basis ct/bu	140.00	137.00	142.00	140.00	130.00	130.00
Futures ct/bu	428.50	439.50	439.50	447.50	455.00	463.75
Flat Price	568.50	576.50	581.50	587.50	585.00	593.75
Rail Freight	-2.70	-3.38	-4.73	0.68	1.35	0.68
Delivered Gulf	565.80	573.12	576.77	588.18	586.35	594.43
Cash Carry	Storage Revenue ct/bu					
Nov-Jan	7.32					
Nov-Mar			11.0			
Nov-May				22.38		
Nov-Jul					20.55	
Nov-Sep						28.63
Cash Carry	Monthly Storage Revenue ct/bu					
Nov-Jan	3.66					
Nov-Mar			2.7			
Nov-May				3.73		
Nov-Jul					2.57	
Nov-Sep						2.86

SRW	Nov	Jan	Mar	May	Jul	Sep
Basis ct/bu	95.00	90.00	90.00	85.00	70.00	70.00
Futures ct/bu	515.25	520.25	520.25	524.50	529.00	535.75
Flat Price	610.25	610.25	610.25	609.50	599.00	605.75
Barge Freight	-62.28	-63.15	-61.42	-60.55	-59.69	-61.42
FOB Shipper	547.97	547.11	548.84	548.95	539.32	544.34
Cash Carry	Storage Revenue ct/bu					
Nov-Jan	-0.87					
Nov-Mar			0.9			
Nov-May				0.98		
Nov-Jul					-8.65	
Nov-Sep						-3.63
Cash Carry	Monthly Storage Revenue ct/bu					
Nov-Jan	-0.43					
Nov-Mar			0.2			
Nov-May				0.16		
Nov-Jul					-1.08	
Nov-Sep						-0.36

UP Rail: Cash Carrying Charges to Warehousemen						
HRW 11%	Nov	Jan	Mar	May	Jul	Sep
Basis ct/bu	140.00	137.00	142.00	140.00	130.00	130.00
Futures ct/bu	428.50	439.50	439.50	447.50	455.00	463.75
Flat Price	568.50	576.50	581.50	587.50	585.00	593.75
Rail Freight	2.70	-1.35	-1.35	2.03	2.03	1.35
Delivered Gulf	571.20	575.15	580.15	589.53	587.03	595.10
Cash Carry	Storage Revenue ct/bu					
Nov-Jan	3.95					
Nov-Mar			8.9			
Nov-May				18.32		
Nov-Jul					15.82	
Nov-Sep						23.90
Cash Carry	Monthly Storage Revenue ct/bu					
Nov-Jan	1.97					
Nov-Mar			2.2			
Nov-May				3.05		
Nov-Jul					1.98	
Nov-Sep						2.39

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	-50	285%	345%	-75
Jul '20	-50	285%	345%	-75
Aug '20	-25	290%	350%	-50
Sep '20	-25	295%	355%	-50
Oct '20		290%	375%	
Nov '19	100	290%	360%	-100
Dec '19	50	290%	355%	-100
Jan '20	125	290%	365%	50
Feb '20	150	290%	355%	50
Mar '20	175	290%	355%	50
Apr '20	-25	290%	355%	-75
May '20	-25	290%	350%	-75
Cents/Bushel Equivalent				
Jun '20	-1.35	34.20	59.69	-2.03
Jul '20	-1.35	34.20	59.69	-2.03
Aug '20	-0.68	34.80	60.55	-1.35
Sep '20	-0.68	35.40	61.42	-1.35
Oct '20		34.80	64.88	
Nov '19	2.70	34.80	62.28	-2.70
Dec '19	1.35	34.80	61.42	-2.70
Jan '20	3.38	34.80	63.15	1.35
Feb '20	4.05	34.80	61.42	1.35
Mar '20	4.73	34.80	61.42	1.35
Apr '20	-0.68	34.80	61.42	-2.03
May '20	-0.68	34.80	60.55	-2.03

Corn	Nov	Jan	Mar	May	Jul	Sep
Basis ct/bu	46.00	45.00	50.00	50.00	50.00	50.00
Futures ct/bu	381.75	391.75	391.75	398.50	404.75	398.75
Flat Price	427.75	436.75	441.75	448.50	454.75	448.75
Barge Freight	-62.28	-63.15	-61.42	-60.55	-59.69	-61.42
FOB Shipper	365.47	373.61	380.34	387.95	395.07	387.34
Cash Carry	Storage Revenue ct/bu					
Nov-Jan	8.13					
Nov-Mar			14.87			
Nov-May				22.48		
Nov-Jul					29.60	
Nov-Sep						21.87
Cash Carry	Monthly Storage Revenue ct/bu					
Nov-Jan	4.07					
Nov-Mar			3.72			
Nov-May				3.75		
Nov-Jul					3.70	
Nov-Sep						2.19

Soybeans	Nov	Jan	Mar	May	Jul	Sep
Basis ct/bu	57.00	51.00	35.00	35.00	35.00	35.00
Futures ct/bu	921.75	934.25	947.25	959.00	969.25	970.00
Flat Price	978.75	985.25	982.25	994.00	1004.25	1005.00
Barge Freight	-62.28	-63.15	-61.42	-60.55	-59.69	-61.42
FOB Shipper	916.47	922.11	920.84	933.45	944.57	943.59
Cash Carry	Storage Revenue ct/bu					
Nov-Jan	5.63					
Nov-Mar			4.37			
Nov-May				16.98		
Nov-Jul					28.10	
Nov-Sep						27.12
Cash Carry	Monthly Storage Revenue ct/bu					
Nov-Jan	2.82					
Nov-Mar			1.09			
Nov-May				2.83		
Nov-Jul					3.51	
Nov-Sep						2.71

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Foreign Basis and Flat Price Values FOB Vessel

Month	Futures	CBOT	KCBT	MGE	Matiff Euro/mt	Euro	\$ AUD	AUW	BWF
Sep-20	U	535.75	463.75	569.75	180.25	1.1283	0.6936	244.00	199.50
Dec-19	Z	515.25	428.50	526.00	177.75	1.1094	0.6899	241.75	207.00
Mar-20	H	520.25	439.50	542.25	180.50	1.1161	0.6914	243.00	211.75
May-20	K	524.50	447.50	552.75	182.75	1.1223	0.6926	243.00	214.00
Jul-20	N	529.00	455.00	561.75	180.25	1.1283	0.6936	244.00	199.00

Basis (ct/bu)		Argentine	S. Australia	S. Australia	W. Aust. APW	W. Aust.	FSU	French	German	Baltic
Shipment	Futures	11.5%	APW 10.5%	AH 11.5%	10.5%	ASW 9%	12.50%	11.50%	12.50%	12.50%
		KCBT	CBOT	CBOT	CBOT	CBOT	Matiff	Matiff	Matiff	Matiff
		Upriver						Rouen		
Jun	N	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-
Dec	Z	89	162	181	143	129	10	3.00	5.50	4.50
Jan	H	83	160	179	141	127	8	1.00	3.50	2.00
Feb	H	97	160	179	141	127	9	2.00	5.50	3.50
Mar	H	110	160	179	141	127	11	7.00	7.00	5.00
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%	APW 10.5%	AH 11.5%	10.5%	ASW 9%	12.50%	11.50%	12.50%	12.50%
		KCBT	CBOT	CBOT	CBOT	CBOT	Matiff	Matiff	Matiff	Matiff
Jun	N	-	-	-	-	-	-	-	-	-
Jul	N	-	-	-	-	-	-	-	-	-
Aug	U	-	-	-	-	-	-	-	-	-
Sep	U	-	-	-	-	-	-	-	-	-
Oct	Z	-	-	-	-	-	-	-	-	-
Nov	Z	-	-	-	-	-	-	-	-	-
Dec	Z	190.00	248.75	255.75	241.75	236.75	208.00	200.52	203.29	202.18
Jan	H	192.00	250.00	257.00	243.00	238.00	210.00	201.46	205.36	203.69
Feb	H	197.00	250.00	257.00	243.00	238.00	212.00	202.57	207.59	205.36
Mar	H	202.00	250.00	257.00	243.00	238.00	214.00	203.69	209.27	207.04
Apr	K	-	-	-	-	-	-	-	-	-
May	K	-	-	-	-	-	-	-	-	-

Basis (ct/bu)		Canada T. B.	St. Law	Vancouver	Vancouver	Vancouver
Shipment	Futures	13.50%	#2, 13.5%	Canada	Canada	Canada
		MGEX	MGEX	#2 13.0%	#2 13.5%	#2 13.8%
				12.5% -25	275 FN	
				-15.00		40.00
Jun	N	-	-	-	-	-
Jul	N	-	-	-	-	-
Aug	U	-	-	-	-	-
Sep	U	-	-	-	-	-
Oct	Z	-	-	-	-	-
Nov	Z	-	-	-	-	-
Dec	Z	-	140.00	135.00	150.00	190.00
Jan	H	-	-	120.00	135.00	175.00
Feb	H	-	-	120.00	135.00	175.00
Mar	H	-	-	120.00	135.00	175.00
Apr	K	-	-	-	-	-
May	N	-	-	-	-	-
Flat Price FOB Vessel (USD/mt)		Canada T. B.	St. Law	Vancouver	Vancouver	Vancouver
Shipment	Futures	13.00%	#2, 13%	Canada	Canada	Canada
		MGEX	MGEX	#2 13.0%	#2 13.5%	#2 13.8%
Jun	N	-	-	-	-	-
Jul	N	-	-	-	-	-
Aug	U	-	-	-	-	-
Sep	U	-	-	-	-	-
Oct	Z	-	-	-	-	-
Nov	Z	-	-	-	-	-
Dec	Z	-	244.71	242.88	248.39	263.08
Jan	H	-	-	243.34	248.85	263.54
Feb	H	-	-	243.34	248.85	263.54
Mar	H	-	-	243.34	248.85	263.54
Apr	K	-	-	-	-	-
May	N	-	-	-	-	-

Cascade Commodity Consulting Company

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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)	(33)	(21)	1	0	(24)	1	(10)	(5)	(5)	(6)	(11)
Brazil (Fortaleza) (30 kmt)	16	14	5	1	0	2	5	2	1	1	(1)	(1)
Egypt (Damietta) (60 kmt)	4	1	7	1	0	4	0	(12)	(6)	(6)	(7)	2
Saudi Arabia (Jeddah) (60 kmt)	(9)	(12)	(1)	1	0	(4)	1	(11)	(5)	(5)	(6)	-
Algeria (Algiers) (30 kmt, 3 kmt/day unlo	-	-	-	1	0	-	-	-	(6)	(6)	(8)	8
Morocco (Casa Blanca) (30 kmt)	-	-	-	1	0	-	-	(6)	(6)	(6)	(9)	7
Nigeria (Lagos) (40 kmt)	(1)	(3)	4	1	0	1	3	1	0	0	(2)	1
Kenya (Mombasa) (40 kmt)	(15)	(17)	4	1	0	1	2	(6)	(3)	(3)	(5)	(3)

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%
	249	256	242	237	228	227	259	230	211	248	245	208	203	202	201	190
Indonesia (Jakarta) (50 kmt)	8	12	-2	-7	-4	-4	28	20	0	14	35	-13	-12	-14	-16	-32
Brazil (Fortaleza) (30 kmt)								20	0	40	39	-1				-22
Egypt (Damietta) (60 kmt)					24	24		20	0			-15	-13	-15	-17	-19
Saudi Arabia (Jeddah) (60 kmt)	29	33	19	14	16	16	48		0	34	35	-14	-12	-14		
Algeria (Algiers) (30 kmt, 3 kmt/day unload)									0				-13	-15	-18	-13
Morocco (Casa Blanca) (30 kmt)									0			-9	-13	-15	-19	-14
Nigeria (Lagos) (40 kmt)	37	42	28	23					0	39	37	-2	-7	-9		-20
Kenya (Mombasa) (40 kmt)	23	28	14	9					0	39	36	-9	-10	-12		-24

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%
Dec	\$208	\$203	\$202	\$190	\$211	\$209	\$208	\$201	\$206	\$230
Jan	\$210	\$205	\$204	\$192	\$213	\$211	\$210	\$201	\$208	\$232
Feb	\$212	\$208	\$205	\$197	\$213	\$211	\$210	\$203	\$209	\$232
Mar	\$214	\$209	\$207	\$202	\$213	\$211	\$210	\$204	\$211	\$233

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%
Dec	\$242	\$256	\$237	\$222	\$227	\$228	\$259	\$263	\$248	\$263
Jan	\$243	\$257	\$238	\$224	\$229	\$230	\$262	\$265	\$249	\$264
Feb	\$243	\$257	\$238	\$224	\$229	\$231	\$264	\$267	\$249	\$264
Mar	\$243	\$257	\$238	\$224	\$229	\$233	\$264	\$267	\$249	\$264

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Cascade Commodity Consulting Company

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Price=USD		Spread Analysis		
Delivery Month		Z	H	K
Starts	1-Dec	1-Mar	1-May	1-Jul
Ends	1-Mar	1-May	1-Jul	
Total Days	92	62	62	
Corn Closing Price	381.75	391.75	398.50	
Storage rate	0.265	0.265	0.265	
Total Storage	24.38	16.43	16.43	
Total Interest	3.80	2.63	2.68	
Full Carry	28.18	19.06	19.11	
Spread Close	-10.00	-6.75	-6.25	
% Full Carry	35%	35%	33%	
CME W Closing Price	515.25	520.25	524.50	
Storage rate	0.165	0.165	0.165	
Total Storage	15.18	10.23	10.23	
Total Interest	5.14	3.49	3.52	
Full Carry	20.32	13.72	13.75	
Spread Close	-5.00	-4.25	-4.5	
% Full Carry	25%	31%	33%	
KCBT Closing Price	428.50	439.50	447.50	
Storage rate	0.265	0.265	0.265	
Total Storage	24.38	16.43	16.43	
Total Interest	4.27	2.95	3.01	
Full Carry	28.65	19.38	19.44	
Spread Close	-11.00	-8.00	-7.50	
% Full Carry	38%	41%	39%	
MGEX Closing Price	526.00	542.25	552.75	
Storage rate	0.233	0.233	0.233	
Total Storage	21.44	14.45	14.45	
Total Interest	5.24	3.64	3.71	
Full Carry	26.68	18.09	18.16	
Spread Close	-16.25	-10.50	-9.00	
% Full Carry	61%	58%	50%	

VSR INCREASES		Z	H	K	N	U
CME VSR (ct/bu)	Spread	Z-H	H-K	K-N	N-U	U-Z
Futures Close Price	Days	515.25	520.25	524.50	529.00	535.75
Base Storage	0.165	15.18	10.23	10.23	10.40	15.18
Z-H (increase .10)	92	7.40	6.20	6.20	6.30	9.20
H-K (increase .10)	62		4.40	6.20	6.30	9.20
K-N (increase .10)	62			4.40	6.30	9.20
N-U (increase .10)	63				4.50	9.20
U-Z (increase .10)	92					7.40
Total Storage		22.58	20.83	27.03	33.80	59.38
Interest Charge	3.90%	5.14	3.49	3.52	3.61	5.34
Full Carry B4 VSR		20.32	13.72	13.75	14.01	20.52
Closing Board Spread		5.00	4.25	4.50	6.75	11.25
Closing Spread % FC		25%	31%	33%	48%	55%

VSR INCREASES		Z	H	K	N	U
KCBT VSR (ct/bu)	Spread	Z-H	H-K	K-N	N-U	U-Z
Futures Close Price	Days	428.50	439.50	447.50	455.00	463.75
Base Storage	0.265	24.38	16.43	16.43	16.70	24.38
Z-H (increase .10)	92	7.40	6.20	6.20	6.30	9.20
H-K (increase .10)	62		4.40	6.20	6.30	9.20
K-N (increase .10)	62			4.40	6.30	9.20
N-U (increase .10)	63				4.50	9.20
U-Z (increase .10)	92					7.40
Total Storage		31.78	27.03	33.23	40.10	68.58
Interest Charge	3.90%	4.27	2.95	3.01	3.11	4.62
Full Carry B4 VSR		28.65	19.38	19.44	19.80	29.00
Closing Board Spread		11.00	8.00	7.50	8.75	12.75
Closing Spread % FC		38%	41%	39%	44%	44%

VSR DECREASES		Z	H	K	N	U
CME VSR (ct/bu)	Spread	Z-H	H-K	K-N	N-U	U-Z
Futures Close Price	Days	515.25	520.25	524.50	529.00	535.75
Base Storage	0.165	15.18	10.23	10.23	10.40	15.18
Z-H (increase .10)	92	*	*	*	*	*
H-K (increase .10)	62		*	*	*	*
K-N (increase .10)	62			*	*	*
N-U (increase .10)	63				*	*
U-Z (increase .10)	92					*
Total Storage		15.18	10.23	10.23	10.40	15.18
Interest Charge	3.90%	5.14	3.49	3.52	3.61	5.34
Full Carry B4 VSR		20.32	13.72	13.75	14.01	20.52
Closing Board Spread		5.00	4.25	4.50	6.75	11.25
Closing Spread % FC		25%	31%	33%	48%	55%

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

547.00

476.50

VSR DECREASES		Z	H	K	N	U
KCBT VSR (ct/bu)	Spread	Z-H	H-K	K-N	N-U	U-Z
Futures Close Price	Days	428.50	439.50	447.50	455.00	463.75
Base Storage	0.265	24.38	16.43	16.43	16.70	24.38
Z-H (increase .10)	92	-7.40	-6.20	-6.20	-6.30	-9.20
H-K (increase .10)	62		*	*	*	*
K-N (increase .10)	62			*	*	*
N-U (increase .10)	63				*	*
U-Z (increase .10)	92					*
Total Storage		16.98	10.23	10.23	10.40	15.18
Interest Charge	3.90%	4.27	2.95	3.01	3.11	4.62
Full Carry B4 VSR		28.65	19.38	19.44	19.80	29.00
Closing Board Spread		11.00	8.00	7.50	8.75	12.75
Closing Spread % FC		38%	41%	39%	44%	44%

* 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

	SW Kansas			SE Colorado		Texas Panhandle		North Carolina	
	HRW	Milo	Corn	HRW	Corn	HRW	Corn	SRW	Corn
Basis	-55.00	-60.00	-3.00	-48.50	10.25	-23.50	63.25	NB	76.25
Futures	428.50	381.75	381.75	428.50	381.75	428.50	381.75	515.25	381.75
Flat Price	373.50	321.75	378.75	380.00	392.00	405.00	445.00	NB	458.00
Flat Price (mt)	137.24	127.64	150.25	139.63	155.51	148.81	176.53	NB	181.69
Wheat/Corn	91%	85%		90%		84%		NA	

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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)		
	Hutchinson	Salina	Wichita	Hutchinson	Salina	Wichita	Hutchinson	Salina	Wichita
11.0% Protein									
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
Tariff Rate (\$/car)	5887.00	5990.00	5792.00	4454.00	4555.00	4361.00	4457.00	4473.00	4450.00
Tariff Rate (c/bu)	159.11	161.89	156.54	120.38	123.11	117.86	120.46	120.89	120.27
Mileage Houston, TX	688.00	761.00	632.00	688.00	761.00	632.00	-	-	-
Rail Cost (c/bu)	0.00	0.00	0.00	-1.35	-1.35	-1.35	0.00	0.00	0.00
Freight Cost (c/bu)	159.11	161.89	156.54	119.03	121.76	116.51	120.46	120.89	120.27
Delivered Value	160.11	159.89	160.54	120.03	119.76	120.51	121.46	118.89	124.27
Delivered bid (10.5% protein)	145.00	145.00	145.00	145.00	145.00	145.00	100.00	100.00	100.00
Cash vs. Delivery	-15.11	-14.89	-15.54	24.97	25.24	24.49	-21.46	-18.89	-24.27
# of Days in Storage	31	31	31	31	31	31	31	31	31
Storage Cost	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22	8.22
Futures	463.75	463.75	463.75	463.75	463.75	463.75	463.75	463.75	463.75
Interest Cost	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56	1.56
TTL Est. Carry Cost	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77	9.77
Cash vs. Delivery	-24.88	-24.66	-25.31	15.20	15.47	14.71	-31.23	-28.66	-34.04

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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
Barge Freight	290%	225%	355%	255%	NA	NA	NA
Tarriff	12.00	9.40	17.30	12.00	NA	NA	NA
Barge Freight (c/bu)/ Lakes	34.80	21.15	61.42	30.60	NA	NA	NA
Delivered Value	42.80	49.15	69.42	48.60	8.00	8.00	-2.00
Delivered Gulf / FOB Elevator	98.00	98.00	98.00	98.00	65.00	35.00	35.00
Cash vs. Delivery	55.20	48.85	28.59	49.40	57.00	27.00	37.00
# of Days in Storage	31	31	31	31	31	31	31
Storage Cost	5.12	5.12	5.12	5.12	5.12	5.12	5.12
Futures	515.25	515.25	515.25	515.25	515.25	515.25	515.25
Interest Cost	1.73	1.73	1.73	1.73	1.73	1.73	1.73
TTL Est. Carry Cost	6.85	6.85	6.85	6.85	6.85	6.85	6.85
Cash vs. Delivery	48.35	42.00	21.74	42.55	50.15	20.15	30.15

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Cascade Commodity Consulting Company
MGEX Delivery Calculations

Price=USD

	Delivered Chicago Gateway		Duluth Replacement*
13.5% Protein	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
Tariff Rate	2408.00	2299.00	N/A
Tariff Rate (c/bu)	65.08	62.14	0.00
Rail Cost	1.35	-2.70	N/A
Freight Cost (c/bu) (Dul -18.25)	66.43	59.43	-35.00
Delivered Value	78.43	71.43	45.00
Del. Chicago Gateway Bid (300 FN)	120.00	120.00	80.00
Cash vs. Delivery	41.57	48.57	33.00
# of Days in Storage	31.00	31.00	31.00
Storage Cost	7.00	7.00	7.00
Futures	526.00	526.00	526.00
Interest Cost	1.77	1.77	N/A
TTL Est. Carry Cost	8.77	8.77	N/A
Cash vs. Delivery	32.80	39.80	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

Illinois River	Zone 1	Zone 2	Zone 3	Zone 4
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
Barge Rate	355%	355%	355%	355%
Tarriff	16.20	14.70	14.25	13.50
Barge Freight (ct/bu)	57.51	52.19	50.59	47.93
Delivered Value	63.51	60.19	59.09	56.93
Delivered Bid	55.00	55.00	55.00	55.00
Cash vs. Delivery	-8.51	-5.19	-4.09	-1.93
# of Days in Storage	31.00	31.00	31.00	31.00
Storage Cost	5.00	5.00	5.00	5.00
Futures	381.75	381.75	381.75	381.75
Interest Cost	1.282	1.282	1.282	1.282
TTL Est. Carry Cost	6.28	6.28	6.28	6.28
Cash vs. Delivery	-14.79	-11.47	-10.37	-8.21

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Deliverable Stocks as of November 1, 2019

Date	1-Nov	Wk Ago	Change	YR Ago
KCBT	104,901	105,986	(1,085)	123,877
CBOT	44,562	45,112	(550)	77,507
MGEX	24,784	25,178	(394)	21,975

KCBT Deliverable Wheat Stocks

Date	1-Nov	Wk Ago	Change	YR Ago
Hutchinson	25,144	25,143	1	28,993
KC	12,928	12,859	69	12,077
Salina	29,912	30,731	(819)	37,363
Wichita	36,917	37,253	(336)	45,444
Total	104,901	105,986	(1,085)	123,877

CBOT Deliverable & Non-Deliverable Wheat Stocks

Date	1-Nov	Wk Ago	Change	YR Ago
Chicago	4,584	4,615	(31)	9,534
Miss. River	4,821	4,818	3	13,135
NW Ohio	9,643	9,823	(180)	11,704
Ohio River	1,886	2,162	(276)	12,265
St. Louis	2,127	1,990	137	2,489
Toledo	21,501	21,704	(203)	28,380
Total	44,562	45,112	(550)	77,507
Non-Deliver	4,105	4,519	(414)	10,131
Net-Deliver	40,457	40,593	(136)	67,376

MGEX Deliverable Wheat Stocks

Date	1-Nov	Wk Ago	Change	YR Ago
Mpls	5,272	5,404	(132)	1,886
Duluth	19,512	19,774	(262)	20,089
Total	24,784	25,178	(394)	21,975

10/10/2019

CHICAGO SRW WHEAT VSR

Variable Storage Rate December 2019 - March 2020 Calculation Period

December 2019 First Delivery Day 12/2/2019
 March 2020 First Delivery Day 3/2/2020
 Number of Carry Days 91
 Storage Rate Used in Calculation \$0.00165/bu/day
 Running Average Percent of Full Carry 31.14%

Date	Dec 2019 Contract Price	Mar 2020 Contract Price	3M LIBOR Plus 200 Basis Points	Financial Full Carry	Sep19-Dec19 Spread	Sep-Dec Spread as % of Full Carry
9/19/2019	\$4.8800	\$4.9425	4.15888	0.201452	0.0625	31.0%
9/20/2019	\$4.8425	\$4.9100	4.13463	0.200761	0.0675	33.6%
9/23/2019	\$4.8300	\$4.9000	4.10625	0.200284	0.0700	35.0%
9/24/2019	\$4.8175	\$4.8850	4.11300	0.200236	0.0675	33.7%
9/25/2019	\$4.7725	\$4.8375	4.09963	0.199607	0.0650	32.6%
9/26/2019	\$4.8425	\$4.9025	4.10438	0.200391	0.0600	29.9%
9/27/2019	\$4.8725	\$4.9375	4.09863	0.200631	0.0650	32.4%
9/30/2019	\$4.9575	\$5.0250	4.08513	0.201343	0.0675	33.5%
10/1/2019	\$4.9875	\$5.0575	4.08863	0.201697	0.0700	34.7%
10/2/2019	\$4.8900	\$4.9625	4.05638	0.200290	0.0725	36.2%
10/3/2019	\$4.8875	\$4.9625	4.04313	0.200101	0.0750	37.5%
10/4/2019	\$4.9050	\$4.9750	4.02700	0.200080	0.0700	35.0%
10/7/2019	\$4.8925	\$4.9650	4.01200	0.199767	0.0725	36.3%
10/8/2019	\$5.0025	\$5.0775	4.00950	0.200851	0.0750	37.3%
10/9/2019	\$5.0025	\$5.0700	3.98425	0.200532	0.0675	33.7%
10/10/2019	\$4.9300	\$4.9975	3.98613	0.199825	0.0675	33.8%
10/11/2019	\$5.0800	\$5.1400	4.00088	0.201526	0.0600	29.8%
10/14/2019	\$5.1100	\$5.1675	4.00088	0.201829	0.0575	28.5%
10/15/2019	\$5.0700	\$5.1325	4.00213	0.201441	0.0625	31.0%
10/16/2019	\$5.1325	\$5.1825	4.00325	0.202087	0.0500	24.7%
10/17/2019	\$5.2550	\$5.3025	3.96588	0.202831	0.0475	23.4%
10/18/2019	\$5.3225	\$5.3700	3.95325	0.203337	0.0475	23.4%
10/21/2019	\$5.2350	\$5.2950	3.93400	0.202208	0.0600	29.7%
10/22/2019	\$5.1800	\$5.2425	3.93600	0.201688	0.0625	31.0%
10/23/2019	\$5.2075	\$5.2600	3.93963	0.202009	0.0525	26.0%
10/24/2019	\$5.1600	\$5.2125	3.93563	0.201484	0.0525	26.1%
10/25/2019	\$5.1775	\$5.2350	3.92813	0.201560	0.0575	28.5%
10/28/2019	\$5.1175	\$5.1800	3.93550	0.201059	0.0625	31.1%
10/29/2019	\$5.1150	\$5.1750	3.92713	0.200926	0.0600	29.9%
10/30/2019	\$5.0925	\$5.1500	3.90913	0.200471	0.0575	28.7%
10/31/2019	\$5.0875	\$5.1475	3.90225	0.200333	0.0600	30.0%
11/1/2019	\$5.1600	\$5.2175	3.89050	0.200895	0.0575	28.6%
11/4/2019				0.150150	0.0000	0.0%
11/5/2019				0.150150	0.0000	0.0%
11/6/2019				0.150150	0.0000	0.0%
11/7/2019				0.150150	0.0000	0.0%
11/8/2019				0.150150	0.0000	0.0%
11/11/2019				0.150150	0.0000	0.0%
11/12/2019				0.150150	0.0000	0.0%
11/13/2019				0.150150	0.0000	0.0%
11/14/2019				0.150150	0.0000	0.0%
11/15/2019				0.150150	0.0000	0.0%
11/18/2019				0.150150	0.0000	0.0%
11/19/2019				0.150150	0.0000	0.0%
11/20/2019				0.150150	0.0000	0.0%
11/21/2019				0.150150	0.0000	0.0%
11/22/2019				0.150150	0.0000	0.0%

Results:

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

If the Running Average Percent of Full Carry on 11/22/2019 is 80% or greater, the Maximum Premium (Storage) Charge will increase to \$0.00265 on 12/19/2019

If the Running Average Percent of Full Carry on 11/22/2019 is greater than 50% and less than 80%, the Maximum Premium (Storage) Charge will remain at \$0.00165/bu/day on 12/19/2019

If the Running Average Percent of Full Carry on 11/22/2019 is 50% or Less, the Maximum Premium (Storage) Charge will remain at \$0.00165/bu/day on 12/19/2019

11/5/2019

KANSAS CITY HRW WHEAT VSR

Variable Storage Rate December 2019 - March 2020 Calculation Period

September 2019 First Delivery Day 12/2/2019
 March 2020 First Delivery Day 3/2/2020
 Number of Carry Days 91
 Storage Rate Used in Calculation \$0.00265/bu/day
 Running Average Percent of Full Carry 46.57%

Date	Dec 2019 Contract Price	Mar 2020 Contract Price	3M LIBOR Plus 200 Basis Points	Financial Full Carry	Sep19-Dec19 Spread	Sep-Dec Spread as % of Full Carry
9/19/2019	\$4.0950	\$4.2325	4.15888	0.284200	0.1375	48.4%
9/20/2019	\$4.0750	\$4.2100	4.13463	0.283740	0.1350	47.6%
9/23/2019	\$4.0650	\$4.1975	4.10625	0.283343	0.1325	46.8%
9/24/2019	\$4.0500	\$4.1850	4.11300	0.283257	0.1350	47.7%
9/25/2019	\$4.0400	\$4.1725	4.09963	0.283016	0.1325	46.8%
9/26/2019	\$4.0825	\$4.2150	4.10438	0.283506	0.1325	46.7%
9/27/2019	\$4.0750	\$4.2075	4.09863	0.283369	0.1325	46.8%
9/30/2019	\$4.1500	\$4.2825	4.08513	0.284004	0.1325	46.7%
10/1/2019	\$4.1150	\$4.2400	4.08863	0.283679	0.1250	44.1%
10/2/2019	\$4.0575	\$4.1950	4.05638	0.282754	0.1375	48.6%
10/3/2019	\$4.0575	\$4.2025	4.04313	0.282618	0.1450	51.3%
10/4/2019	\$4.0400	\$4.1850	4.02700	0.282275	0.1450	51.4%
10/7/2019	\$4.0225	\$4.1700	4.01200	0.281944	0.1475	52.3%
10/8/2019	\$4.1025	\$4.2425	4.00950	0.282729	0.1400	49.5%
10/9/2019	\$4.1325	\$4.2625	3.98425	0.282770	0.1300	46.0%
10/10/2019	\$4.0325	\$4.1650	3.98613	0.281782	0.1325	47.0%
10/11/2019	\$4.1950	\$4.3200	4.00088	0.283575	0.1250	44.1%
10/14/2019	\$4.2575	\$4.3775	4.00088	0.284208	0.1200	42.2%
10/15/2019	\$4.2125	\$4.3425	4.00213	0.283766	0.1300	45.8%
10/16/2019	\$4.2500	\$4.3775	4.00325	0.284157	0.1275	44.9%
10/17/2019	\$4.3125	\$4.4400	3.96588	0.284382	0.1275	44.8%
10/18/2019	\$4.3375	\$4.4600	3.95325	0.284494	0.1225	43.1%
10/21/2019	\$4.2550	\$4.3850	3.93400	0.283463	0.1300	45.9%
10/22/2019	\$4.2125	\$4.3475	3.93600	0.283062	0.1350	47.7%
10/23/2019	\$4.2325	\$4.3700	3.93963	0.283299	0.1375	48.5%
10/24/2019	\$4.1950	\$4.3275	3.93563	0.282884	0.1325	46.8%
10/25/2019	\$4.2275	\$4.3575	3.92813	0.283127	0.1300	45.9%
10/28/2019	\$4.1700	\$4.3000	3.93550	0.282633	0.1300	46.0%
10/29/2019	\$4.1900	\$4.3150	3.92713	0.282744	0.1250	44.2%
10/30/2019	\$4.1825	\$4.3050	3.90913	0.282479	0.1225	43.4%
10/31/2019	\$4.1975	\$4.3225	3.90225	0.282554	0.1250	44.2%
11/1/2019	\$4.2600	\$4.3875	3.89050	0.283044	0.1275	45.0%
11/4/2019				0.241150	0.0000	0.0%
11/5/2019				0.241150	0.0000	0.0%
11/6/2019				0.241150	0.0000	0.0%
11/7/2019				0.241150	0.0000	0.0%
11/8/2019				0.241150	0.0000	0.0%
11/11/2019				0.241150	0.0000	0.0%
11/12/2019				0.241150	0.0000	0.0%
11/13/2019				0.241150	0.0000	0.0%
11/14/2019				0.241150	0.0000	0.0%
11/15/2019				0.241150	0.0000	0.0%
11/18/2019				0.241150	0.0000	0.0%
11/19/2019				0.241150	0.0000	0.0%
11/20/2019				0.241150	0.0000	0.0%
11/21/2019				0.241150	0.0000	0.0%
11/22/2019				0.241150	0.0000	0.0%

Needed to reverse the VSR
 57.33% Percent of full carry
 0.162255 Spread average

Results:

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

If the Running Average Percent of Full Carry on 11/22/2019 is 80% or greater, the Maximum Premium (Storage) Charge will increase to \$0.00365 on 12/19/2019

If the Running Average Percent of Full Carry on 11/22/2019 is greater than 50% and less than 80%, the Maximum Premium (Storage) Charge will remain at \$0.00265/bu/day on 12/19/2019

If the Running Average Percent of Full Carry on 11/22/2019 is 50% or Less, the Maximum Premium (Storage) Charge will decline to \$0.00165/bu/day on 12/19/2019

Hastings, NE	Gulf	Gulf	*KC DOM	Gulf
Basis KWZ	\$ 1.45	\$ 1.45	\$ 1.39	\$ 1.45
Shuttle /DET Freight	\$ 1.32	\$ 1.32	\$ 0.12	\$ 1.32
FOB elev	\$ 0.13	\$ 0.13	\$ 1.51	\$ 0.13
Rate	Chicago	St. Louis	St. Louis	Memphis
DET	\$ 1.16	\$ 1.16		\$ 1.23
Single car	\$ 1.28	\$ 1.32		\$ 1.38
Shuttle Rate	\$ 1.07	\$ 1.07		\$ 1.12
Del DET train	\$ 1.28	\$ 1.29		\$ 1.35
Del Single car	\$ 1.41	\$ 1.45		\$ 1.51
Del Shuttle train	\$ 1.20	\$ 1.20		\$ 1.24
KWZ-WZ spread	\$ (0.87)	\$ (0.87)	\$ (0.87)	\$ (0.87)
Basis WZ9	\$ 0.42	\$ 0.33	\$ 0.64	\$ 0.38
Delivery	\$ 0.06	\$ 0.16	\$ 0.16	\$ 0.26
difference	\$ 0.36	\$ 0.17	\$ 0.48	\$ 0.12

*KC domestic is HRW delivered to ST. LOUIS vs stopping WZ9

The KC ord bid is an estimate, there is no bid.