
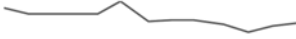






















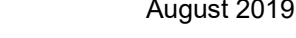


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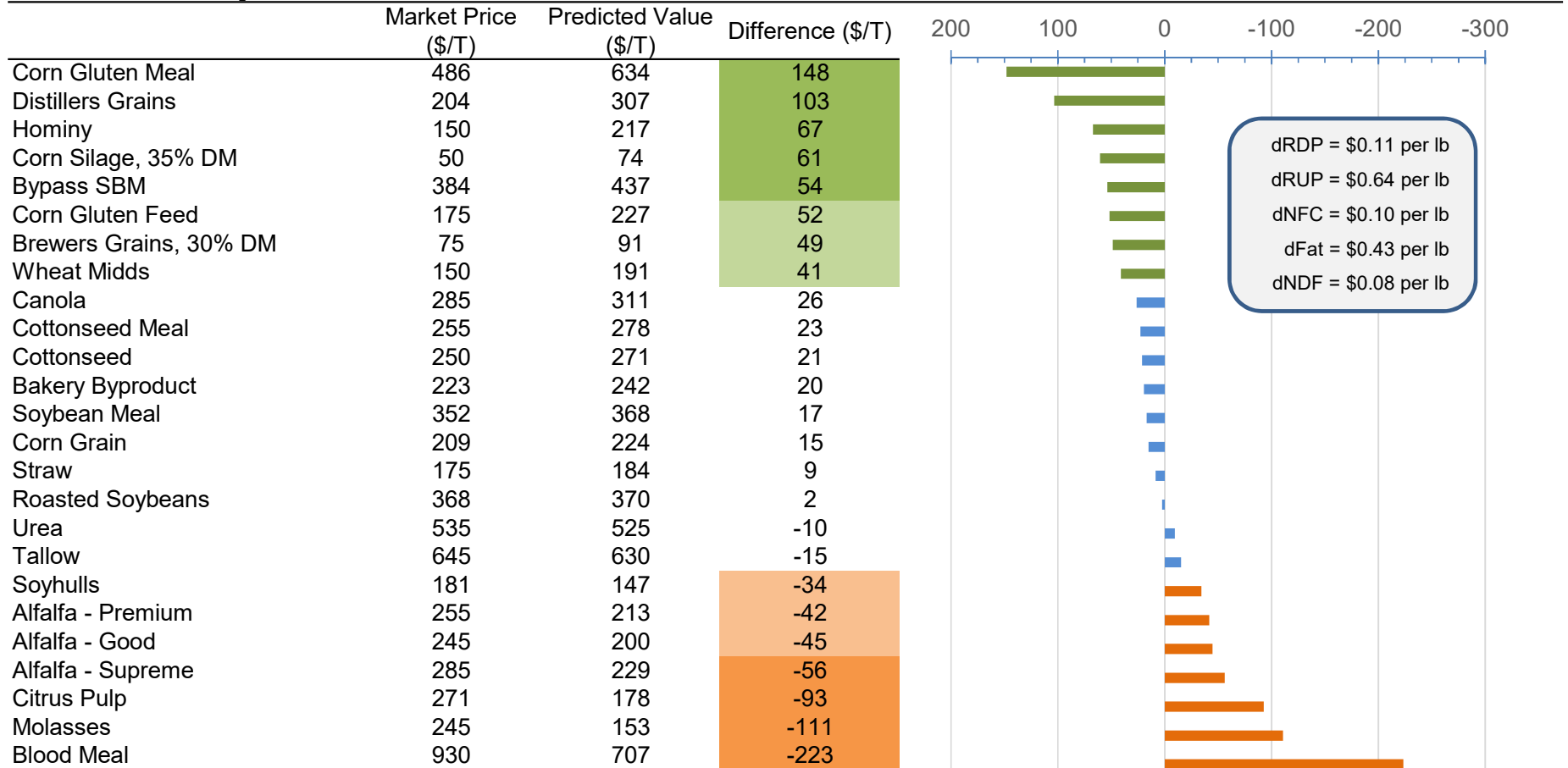
1-Yr Ingredient Price Change (\$/T)

	Aug-18	Aug-19	1-Yr Graph
Bakery Byproduct	184	223	
Citrus Pulp	297	271	
Corn Grain	175	209	
Cottonseed	245	250	
Hominy	195	150	
Molasses	240	245	
Soyhulls	152	181	
Tallow	525	645	
Wheat Midds	142	150	
Brewers Grains, 30% DM	75	75	
Blood Meal	983	930	
Canola	300	285	
Corn Gluten Feed	150	175	
Corn Gluten Meal	583	486	
Cottonseed Meal	355	255	
Distillers Grains	192	204	
Roasted Soybeans	378	368	
Soybean Meal	371	352	
Bypass SBM	400	384	
Urea	575	535	
Alfalfa - Supreme	300	285	
Alfalfa - Premium	260	255	
Alfalfa - Good	230	245	
Corn Silage, 35% DM	50	50	
Straw	140	175	

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Global Nutrient Analysis



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Component Nutrient Analyses

<i>Carbohydrate Analysis</i>	Market Price (\$/T)	Predicted Value (\$/T)	Difference (\$/T)
Corn Silage, 35% DM	50	85	89
Citrus Pulp	271	326	55
Hominy	150	166	16
Molasses	245	254	11
Alfalfa - Good	245	232	-13
Corn Grain	209	189	-20
Alfalfa - Premium	255	228	-27
Wheat Midds	150	121	-29
Soyhulls	181	144	-37
Bakery Byproduct	223	182	-40
Alfalfa - Supreme	285	221	-64

per lb
 Starch = \$0.11
 Sugar = \$0.18
 Sol Fiber = \$0.31
 eNDF = \$0.13

<i>Protein Analysis</i>	Market Price (\$/T)	Predicted Value (\$/T)	Difference (\$/T)
Corn Gluten Meal	486	667	181
Distillers Grains	204	252	48
Bypass SBM	384	423	40
Brewers Grains, 30% DM	75	83	23
Cottonseed Meal	255	268	13
Urea	535	534	-1
Canola	285	283	-2
Soybean Meal	352	337	-15
Corn Gluten Feed	175	140	-35
Roasted Soybeans	368	319	-49
Cottonseed	250	168	-82
Blood Meal	930	777	-153

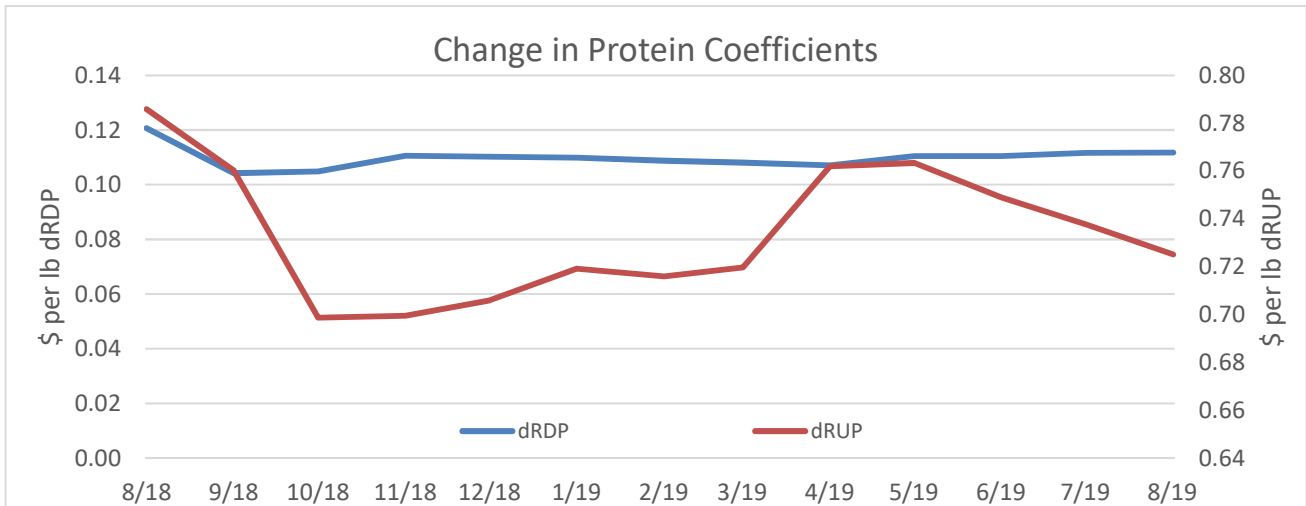
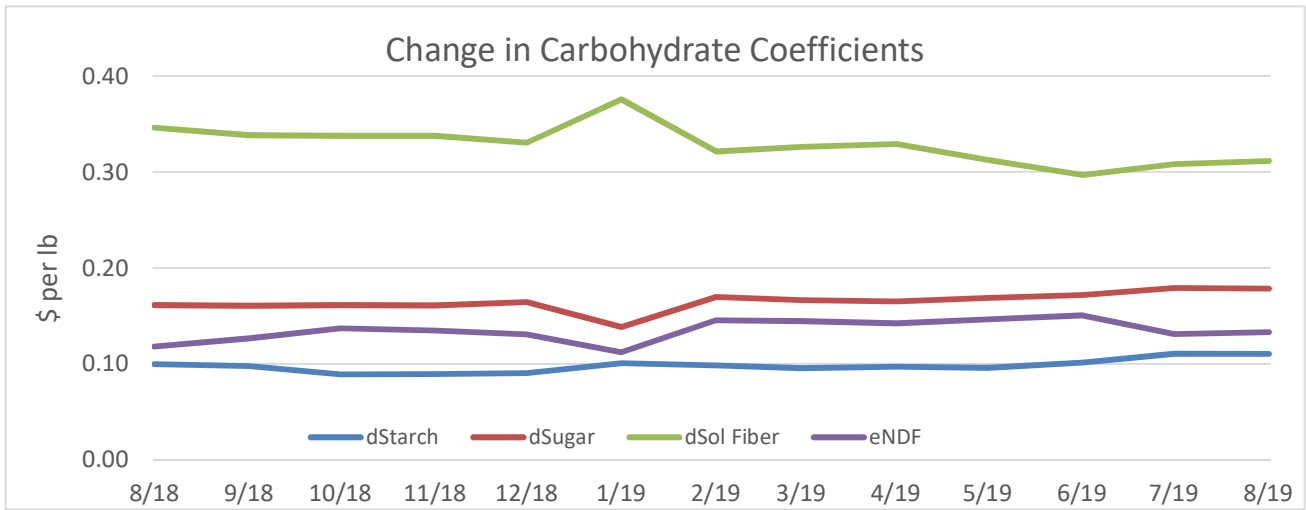
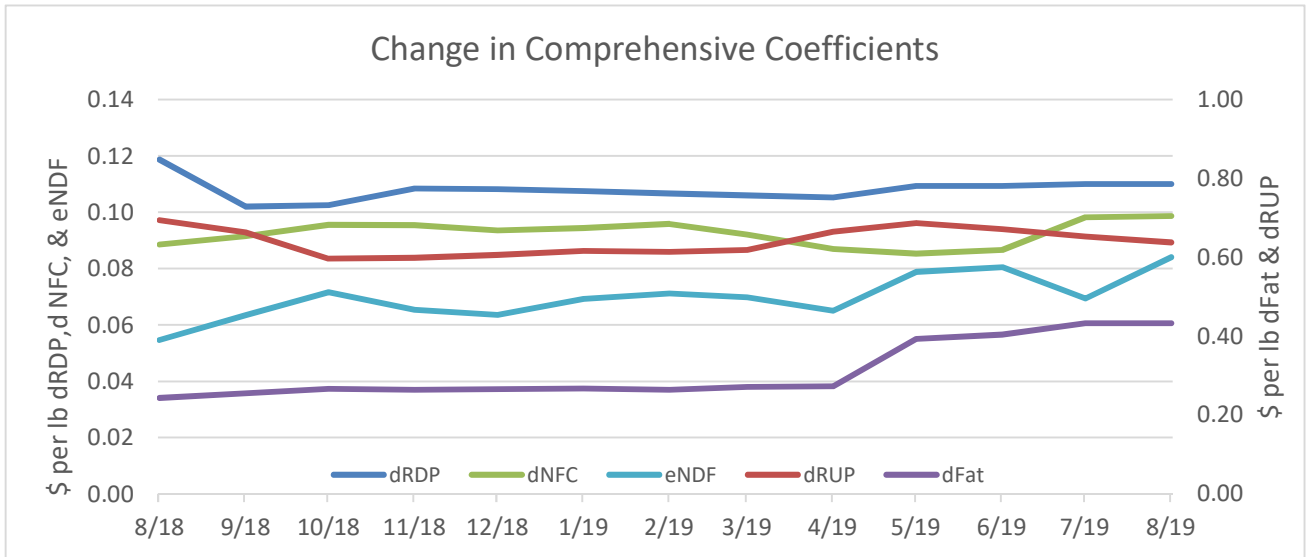
per lb
 dRDP = \$0.11
 dRUP = \$0.73

<i>Fiber Analysis</i>	Market Price (\$/T)	Predicted Value (\$/T)	Difference (\$/T)
Soyhulls	181	323	142
Corn Silage, 35% DM	50	83	86
Straw	175	234	59
Corn Gluten Feed	175	150	-25
Wheat Midds	150	97	-53
Distillers Grains	204	128	-76
Alfalfa - Good	245	156	-89
Brewers Grains, 30% DM	75	45	-89
Cottonseed	250	138	-112
Citrus Pulp	271	121	-150

per lb
 eNDF = \$0.09
 dNDF = \$0.27

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Non-Forage Purchased Feed Costs

A ration supporting 90 lbs milk at 3.9% fat and 3.2% protein was modeled in CNCPS at 56 lbs DMI. The ration was composed of 60% forage using 45% corn silage and 15% mostly legume forage. Composition of the forages were based on samples (+30,000) submitted to a commercial lab during 2018.

To complement the forages, grains, byproducts, minerals, vitamins, etc made up the remaining 40% of DM. The major ingredients of the starch and protein mix were ground corn (39.5%), canola meal (21.0%), bypass SBM (20.7%), soyhulls (14.8%), blood meal (3.6%), Mepron® (2.2%) and urea (2.2%). The remaining 3.5% of DM was composed of bypass fat, minerals, vitamins, and additives.

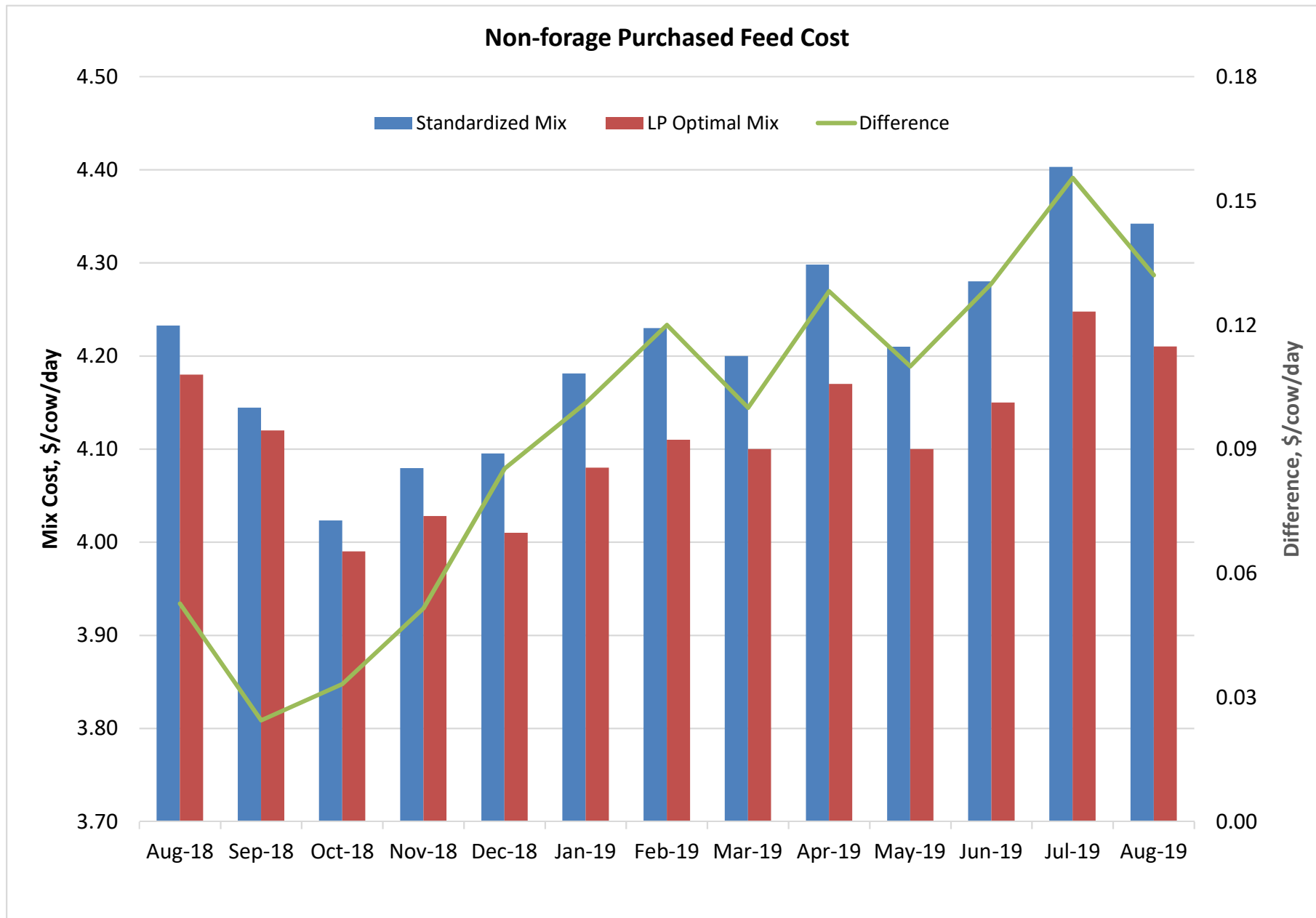
The nutrient composition (% DM) of the starch and protein mix, which will be referred to as the Standardized Mix, is 11.6% RDP, 13.5% digestible RUP, 28.4% starch, 5.5% sugar, 4.8% fat, 0.36% mMet, 0.81% mLys, and 0.3% mHis. Simple linear programming was used to find the optimal or minimal cost subject to the nutrient composition of the Standardized Mix using all the non-forage feed ingredients in Feed \$ense. The optimal mix will be referred to as the LP Optimal Mix.

Page 6 of Feed \$ense shows the changes in the Standardized Mix cost over the last 13 months which reached a high last month. For the most recent month, the Standardized Mix is \$4.34/cow/day which is a decrease of 6¢/cow/day from the previous month. Since Oct, the 32¢/cow/day increase has been driven by the increase in corn, blood meal, and soyhull prices. On average, the LP Optimal Mix was 9¢/cow/day less than the Standardized Mix. In some months, such as Sep and Oct, there was little difference between the Standardized and LP Optimal Mixes.

The feeds that were pulled in that reduced cost were typically feeds that are undervalued in Feed \$ense. This is an illustration of the usefulness of the simple ranking in Feed \$ense. An 9¢/cow/day savings is very optimistic but savings of 4-5¢/cow/day may be achievable if undervalued feedstuffs fit in the ration. Use of undervalued feedstuffs may reduce ration cost, but value is only one of several factors that should be considered when evaluating the inclusion of a new ingredient. The most important rule is never sacrifice IOFC when attempting to reduce feed cost.

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Historical Undervalue/Overvalue of Feedstuffs (\$/T)

<i>Global Analysis</i>	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Alfalfa - Good	-47	-54	-57	-61	-57	-52	-65	-67	-64	-61	-55	-39	-45
Alfalfa - Premium	-56	-61	-77	-69	-60	-50	-59	-61	-56	-52	-57	-50	-42
Alfalfa - Supreme	-79	-76	-84	-80	-66	-62	-66	-72	-81	-65	-60	-72	-56
Bakery Byproduct	60	63	66	66	62	55	53	53	54	41	35	19	20
Blood Meal	-218	-171	-112	-123	-128	-102	-113	-148	-231	-247	-273	-235	-223
Brewers Grains, 30% DM	81	72	54	55	57	61	60	62	75	59	55	52	49
Bypass SBM	78	64	51	47	54	57	51	58	78	83	78	52	54
Canola	26	27	20	9	4	4	5	21	21	37	34	18	26
Citrus Pulp	-134	-120	-117	-118	-120	-140	-103	-109	-114	-105	-90	-89	-93
Corn Gluten Feed	74	56	44	40	45	44	54	53	50	61	54	50	52
Corn Gluten Meal	102	79	36	37	33	11	0	20	86	129	171	165	148
Corn Grain	40	44	51	49	48	40	39	34	27	26	14	16	15
Corn Silage, 35% DM	35	42	49	45	42	48	50	47	41	47	49	50	61
Cottonseed	46	46	60	79	66	38	45	58	65	12	6	15	21
Cottonseed Meal	-39	-52	-30	-18	4	-37	47	48	54	34	30	27	23
Distillers Grains	101	87	62	76	80	94	95	107	118	119	116	112	103
Hominy	42	41	55	59	73	71	72	69	67	53	54	68	67
Molasses	-117	-110	-105	-105	-108	-81	-109	-113	-119	-124	-122	-111	-111
Roasted Soybeans	54	45	28	31	29	37	32	32	49	16	20	-2	2
Soybean Meal	21	10	5	14	18	19	17	23	32	41	37	20	17
Soyhulls	-8	-7	-7	-23	-29	-40	-55	-54	-53	-36	-43	-38	-34
Straw	14	22	31	24	22	29	32	29	24	34	36	27	9
Tallow	-45	-40	-38	-42	-40	-37	-43	-48	-56	-18	-17	-15	-15
Urea	-9	-5	-2	-4	-5	-2	-7	-9	-13	-13	-13	-9	-10
Wheat Midds	64	61	66	65	35	30	35	53	48	26	31	46	41

<i>Carbohydrate Analysis</i>	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Alfalfa - Good	1	-6	-4	-6	-6	-7	-12	-11	-7	-15	-11	0	-13
Alfalfa - Premium	-30	-34	-43	-34	-29	-21	-27	-27	-22	-26	-34	-31	-27
Alfalfa - Supreme	-76	-71	-71	-67	-56	-52	-56	-60	-71	-64	-63	-76	-64
Bakery Byproduct	-16	-15	-17	-17	-19	-30	-24	-24	-21	-19	-22	-42	-40
Citrus Pulp	49	51	52	52	47	46	58	57	59	56	60	58	55
Corn Grain	-1	0	-7	-9	-7	0	-10	-13	-14	-12	-19	-20	-20
Corn Silage, 35% DM	73	79	81	80	77	75	92	90	90	90	94	87	89
Hominy	-15	-19	-13	-9	6	7	4	0	2	0	5	16	16
Molasses	4	4	4	4	6	10	6	5	4	4	4	11	11
Soyhulls	-4	-3	2	-13	-22	-32	-49	-46	-46	-32	-41	-39	-37
Wheat Midds	-28	-29	-25	-27	-56	-59	-54	-35	-41	-45	-38	-24	-29

<i>Protein Analysis</i>	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Blood Meal	-138	-86	-22	-35	-41	-12	-23	-60	-146	-186	-211	-168	-153
Brewers Grains, 30% DM	44	33	13	15	17	21	20	21	34	35	30	27	23
Bypass SBM	60	45	31	27	35	38	32	38	59	70	65	39	40
Canola	-3	-3	-12	-23	-28	-27	-26	-3	-2	12	8	-10	-2
Corn Gluten Feed	3	-20	-37	-39	-33	-36	-27	-26	-24	-16	-24	-32	-35
Corn Gluten Meal	141	122	81	81	77	57	45	65	129	158	201	196	181
Cottonseed	-62	-71	-65	-42	-55	-86	-79	-69	-60	-84	-92	-79	-82
Cottonseed Meal	-64	-79	-58	-45	-23	-64	19	20	26	24	20	17	13
Distillers Grains	69	54	27	41	46	44	44	56	68	69	65	57	48
Roasted Soybeans	-32	-45	-67	-62	-65	-57	-61	-64	-48	-32	-29	-53	-49
Soybean Meal	-6	-18	-24	-15	-10	-9	-13	-5	6	13	8	-12	-15
Urea	1	6	9	7	5	9	4	0	-5	-7	-7	-2	-1

<i>Fiber Analysis</i>	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19
Alfalfa - Good	-89	-97	-104	-107	-100	-95	-110	-111	-107	-107	-102	-88	-89
Brewers Grains, 30% DM	-96	-96	-95	-92	-90	-81	-82	-85	-84	-90	-89	-88	-89
Citrus Pulp	-183	-172	-172	-170	-168	-183	-148	-153	-152	-149	-134	-145	-150
Corn Gluten Feed	-10	-24	-31	-33	-25	-22	-12	-15	-20	-15	-20	-28	-25
Corn Silage, 35% DM	68	71	69	68	70	79	79	77	76	78	79	73	86
Cottonseed	-120	-118	-101	-82	-95	-124	-115	-106	-107	-128	-133	-123	-112
Distillers Grains	-69	-73	-80	-64	-59	-70	-69	-61	-62	-68	-67	-70	-76
Soyhulls	153	156	159	150	150	155	138	133	136	141	135	141	142
Straw	71	75	72	66	68	75	76	75	73	82	82	72	59
Wheat Midds	-51	-52	-45	-44	-72	-74	-70	-52	-57	-63	-58	-48	-53

FEED \$ENSE MARGINS

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