



**VIRGINIA
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**Virginia
Cooperative
Extension**

Virginia Tech • Virginia State University

Livestock Update Webinar

Nutrition Update 5/8/20

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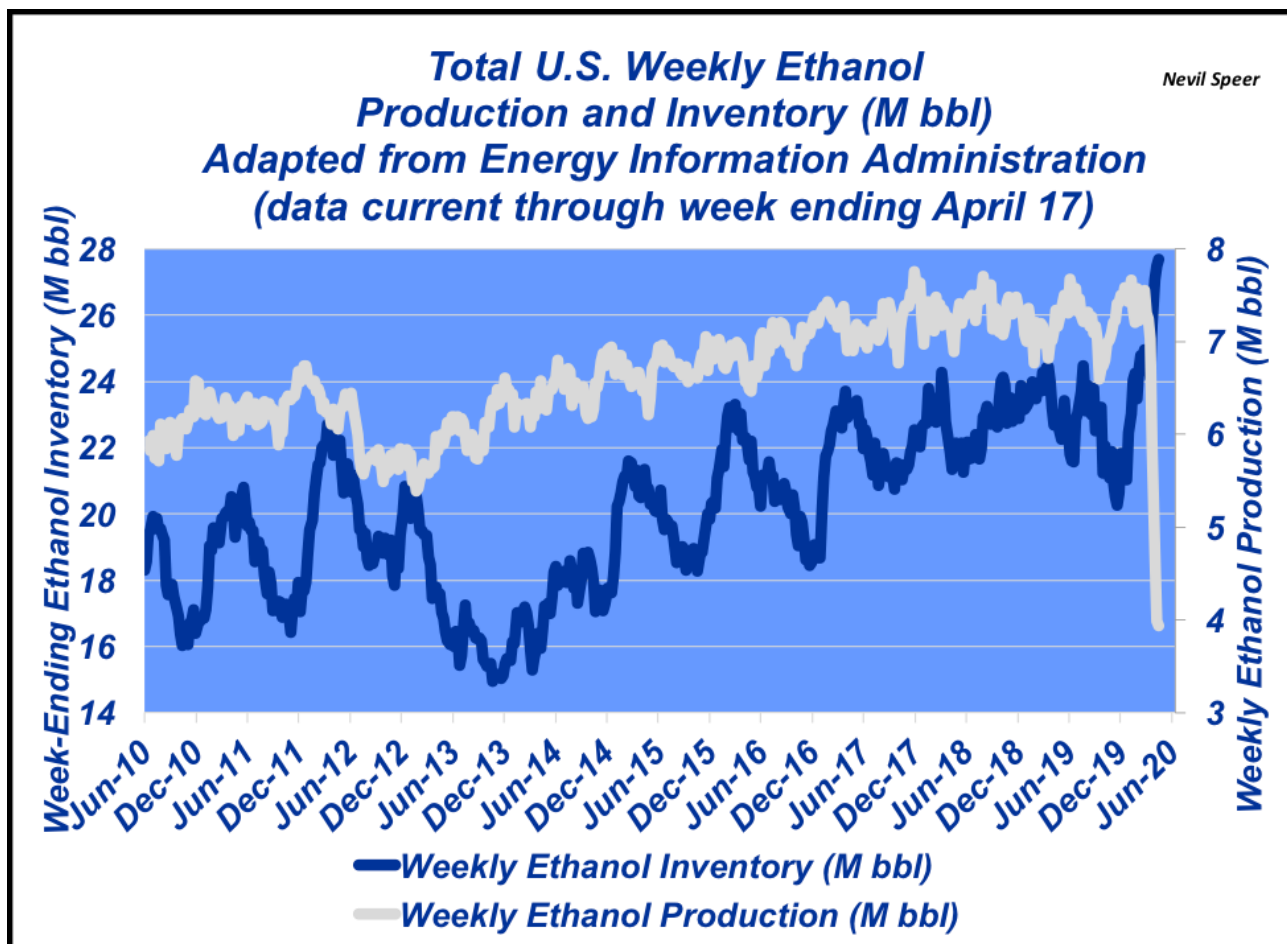
Challenges with Feed Availability

- **Limited availability of DDGS with shutdown of corn dry mills**
 - ▣ **Related to low demand for ethanol to blend with gasoline**
 - ▣ **DDGS that are available are less affordable**

- **Disruptions in other commodities like corn gluten feed, soybean meal, soy hulls?**
 - ▣ **Grain futures prices have lost significant value since January 1st**
 - ▣ **Cash grain market in VA is still strong according to positive basis**

U.S. Ethanol Production

- Reports of 71 ethanol plants idled throughout the country



Adjusting to Changing Feed Markets

- Be cognizant of local availability and prices of feedstuffs
- Plan to buy early so alternative feeds can be sourced and evaluated
 - ▣ Ask what other options may be available if prices increase
- Evidence of changes:

Feedstuff	Month	\$ / ton	Source
Corn Gluten Feed	June 2019	298.00	Local Price, Southside, VA
	May 2020	260.25	
Dried Distillers Grains	May 2019	150.00	Mid-Atlantic Feed \$ense
	May 2020	210.00	
	May 2019	160.00	
	Feb. 2020	205.00	
	May 2020	260.00	

Pricing Per Unit of Nutrient

- **Best way to compare different feedstuffs on a equal basis**
- **Calculate price of feed per pound on a dry matter (DM) basis**
 - ▣ **As fed price (\$/ton or bushel) / (lbs./ton or bushel) = \$/lb. as fed feed**
 - ▣ **\$/lb. as fed feed / (%DM of feed / 100) = \$/lb. DM feed**
- **Divide \$/lb. DM by percentage of nutrient of interest**
 - ▣ **\$/lb. DM feed / (% nutrient / 100) = \$/lb. nutrient**

Cost Per Unit TDN

□ Corn:

- $\$4.05 / 56 = \$0.072 / \text{lb. as fed}$
- $\$0.072 / 0.88 (\%DM) = \$0.082 / \text{lb. DM}$
- $\$0.082 / 0.88 (\%TDN) = \$0.093 / \text{lb. TDN}$

□ Corn Gluten Feed:

- $\$260.25 / 2000 = \$0.13 / \text{lb.}$
- $\$0.13 / 0.91 (\%DM) = \$0.143 / \text{lb. DM}$
- $\$0.143 / 0.92 (\%TDN) = \$0.155 / \text{lb. TDN}$

	Corn	Corn Gluten Feed
Unit Price	\$4.05 / bu.	\$260.25 / ton
Lb. / Unit	56 lb. / bu.	2,000 lb. / ton
DM, %	88	91
TDN, % DM	88	92

Cost Per Unit CP

Commodity Blend:

- $\$220.00 / 2000 = \$0.11 / \text{lb.}$
- $\$0.11 / 0.88 (\% \text{DM}) = \$0.124 / \text{lb. DM}$
- $\$0.124 / 0.168 (\% \text{CP}) = \$0.738 / \text{lb. CP}$

Corn Gluten Feed:

- $\$260.25 / 2000 = \$0.13 / \text{lb.}$
- $\$0.13 / 0.91 (\% \text{DM}) = \$0.143 / \text{lb. DM}$
- $\$0.143 / 0.168 (\% \text{CP}) = \$0.851 / \text{lb. CP}$

	Commodity Blend	Corn Gluten Feed
\$ / Ton	\$220.00	\$260.25
DM, %	88	91
CP, % DM	16.8	23

Feed Value Calculator



DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

COMPARATIVE FEED VALUE CALCULATOR

BASIS INGREDIENTS \$
Corn \$3.72 \$/bushel
Soybean meal 48% \$325.00 \$/ton

Ingredient	AS - FED				Protein and Energy				Energy Only				
	DM% ¹	CP%	TDN%	\$/ton	\$/cwt	\$/ton	\$/ton	DM Ratio	\$/cwt	\$/ton	\$/ton	DM	Ratio
1 Brewers Grains, Dehydrated	92	26	76		\$10.59	\$211.80	\$230.21	####	\$6.23	\$124.66	\$135.50	####	
2 Brewers Grains, Wet	30	8.4	24		\$3.39	\$67.81	\$226.04	####	\$1.97	\$39.37	\$131.22	####	
3 Corn	88	9	88	132.9	\$7.08	\$141.59	\$160.89	107%	\$7.22	\$144.34	\$164.02	109%	
4 Corn Gluten Feed	90	23	80	100	\$10.07	\$201.49	\$223.88	201%	\$6.56	\$131.22	\$145.80	131%	
5 Cottonseed Hulls	90	4	45		\$3.47	\$69.44	\$77.16	####	\$3.69	\$73.81	\$82.01	####	
6 Cottonseed Meal	90	46	77	253	\$15.56	\$311.12	\$345.69	123%	---	---	---	---	
7 Defatted Rice Bran	90	14.3	52.8		\$6.43	\$128.66	\$142.96	####	\$4.33	\$86.60	\$96.23	####	
8 Defatted Rice Mill Feed	90	6.9	31.5		\$3.44	\$68.75	\$76.38	####	\$2.58	\$51.67	\$57.41	####	
9 Dried Distillers Grains	91	31	108	95	\$13.59	\$271.76	\$298.64	286%	\$8.86	\$177.14	\$194.66	186%	
10 Full Fat Rice Bran	91	14	71		\$7.37	\$147.33	\$161.90	####	\$5.82	\$116.46	\$127.97	####	
11 Grass Hay	88	11	52	81	\$5.58	\$111.57	\$126.78	138%	\$4.26	\$85.29	\$96.92	105%	
12 Hominy	89	11	89	90	\$7.63	\$152.51	\$171.37	169%	\$7.30	\$145.98	\$164.02	162%	
13 Soybean Hulls	89	12	74	163	\$7.04	\$140.83	\$158.23	86%	\$6.07	\$121.38	\$136.38	74%	
14 Wheat Middlings	89	17	75	95	\$8.32	\$166.49	\$187.07	175%	\$6.15	\$123.02	\$138.22	129%	
15 Whole Cottonseed	91	23	93	228	\$10.79	\$215.88	\$237.23	95%	\$7.63	\$152.54	\$167.63	67%	
16 Silage, Corn	34	8	72	37.2	\$5.95	\$118.97	\$349.91	320%	\$5.90	\$118.10	\$347.34	317%	
17	0	0	0	0	\$0.00	\$0.00	\$0.00	0%	\$0.00	\$0.00	\$0.00	0%	
18 3-way commodity pellet	89.5	14.2	76.5	312	\$7.72	\$154.40	\$172.51	49%	\$6.27	\$125.48	\$140.20	40%	

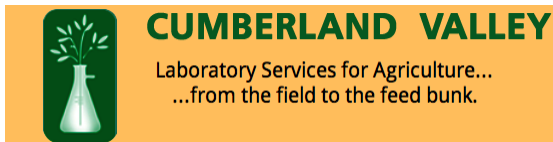
<http://www.uaex.edu/farm-ranch/animals-forages/beef-cattle/nutrition-feeding.aspx>

Feed Testing Labs

- Need to get commodity blends tested as proportion of ingredients has likely changed
- Nutrients needed:
 - ▣ DM, CP, NDF, ADF, Fat, Ca, P, K, Mg, S, TDN
- Forages, grains, and some coproducts
 - ▣ NIR (near infrared spectroscopy) is sufficient because of adequate reference samples
- Coproducts and mixed feeds
 - ▣ Wet chemistry methods because NIR database may not have appropriate reference samples
- Cumberland Valley Analytical Services:
www.foragelab.com
- Dairy One Forage Lab: www.dairyone.com

Feed Testing Labs

Package Type	Minimum Package	Price	Notes
Cumberland Valley Analytical Services			
NIR	NIR1	\$17.25	No S
Wet Chemistry	Basic NDF	\$30.00	No fat
Dairy One Forage Lab			
NIR	Forage/Grain NIR	\$18.00	
Wet Chemistry	Basic Plus Minerals	\$31.00	No fat or S



Holding Market Livestock

- ❑ **Be aware of maximums for fat thickness for market livestock**
- ❑ **Decrease energy in diet to reduce daily feed costs**
 - **Need to be cognizant of protein requirements**
- ❑ **Possible target ADGs:**
 - **Heavy weight cattle (> 1,400 lbs.) – Move from 3.5 lb. target ADG to 2.0 lb.**
 - **Lighter weight cattle – Move to 3.0 lb. target ADG**
- ❑ **Options for holding livestock is marketing opportunities are delayed:**
 - **Adding forage to decrease energy**
 - **Least potential for upsetting cattle used to eating ad lib**
 - **Limit-feeding same diet**
 - **Need to have > 24 in. bunk space for market cattle**
- ❑ **Source on YouTube from University of Illinois Extension**
 - **Managing Harvest-Ready Cattle During Packing Plant Slowdowns**
 - **<https://www.youtube.com/watch?v=AFBW-Frljeg>**

Ration Formulation Software

- Oklahoma State Cowculator 2.0
 - Free - Cow/calf only – Best for mature COWS
 - <http://beefextension.com/pages/cccalc.html>
- University of Minnesota Ration Balancer
 - Free - Separate cow/calf and feedlot balancers
 - <http://www.extension.umn.edu/agriculture/beef/>
- BRaNDS
 - Modules for cows/heifers, bulls, stockers, and feedlot
 - Several options available at \$50 to \$475
 - <https://store.extension.iastate.edu/ProductList?Keyword=brands>

Balancer		
Feed Number	Description	Lbs per day As fed
9	VA Stockpiled Fescue	32.5
62	Corn gluten feed	3
108	SVAREC Mineral	0.063

Cost/day	\$0.76
Protein Ratio	1.57
Estimated ADG	1.29
Desired ADG	1.28
Days to gain one condition score	76
Intake Ratio	0.85
DM Intake	28.8
Predicted DM Intake	33.8
Calcium Ratio	1.55
Phosphorus Ratio	1.51



Average Cow Weight (lbs):	1250	Numl
Stage of Lactation:	Not Currently Nursing a Calf	Durat
State of Gestation:	9 Months Pregnant	Level
Current Body Condition Score (1-9):	5.5	Avera
Target Body Condition Score (1-9):	6	Breec
CLICK HERE FOR BODY CONDITION SCORING INFORMATION		Additi

FEEDSTUFFS:	Price \$/ton	INTAKE			ENERG	
		As-Fed	DM %	TDN %	NEM	NEG Mcal/c
Fescue KY 31 Hay Mature	\$100	26	22.9	88	52	16
Corn Gluten Feed	\$125	3	2.7	90	80	56