



Midwest Ration Reformulation

TMR Ingredients	\$/T AF	Original Ration	NovaMeal Ration
Corn Silage	\$75.00	81.25	81.25
Alfalfa Haylage	\$65.00	18.57	18.00
Alfalfa Hay	\$200.00	1.11	1.11
Soy Hulls	\$220.00	0.32	-
Whole Cottonseed	\$475.00	4.35	2.45
Ground Corn	\$250.00	9.75	10.35
DDG	\$220.00	3.19	2.64
NovaMeal	\$307.00	-	4.26
SBM	\$510.00	2.83	2.78
Bypass SBM	\$530.00	3.41	1.36
Molasses	\$250.00	2.03	2.03
Lactation Mineral	\$750.00	1.84	1.84
Energy Booster 100	\$1,750.00	0.10	0.15
RP Lysine	\$7,000.00	0.08	0.10
RP Methionine	\$14,000.00	0.06	0.04
Total As Fed Intake		128.9	128.3
Total DMI		58.25	58.00
True feed \$		\$9.74	\$9.34
Ration Savings/phpd			\$0.40

Midwest prices as of 7.29.2022

Ration Output Comparison			
Nutrient	Original Ration	NovaMeal Ration	Unit
ME allowable milk	96.2	96.6	lb.
MP allowable milk	96.2	101.1	lb.
Metabolizable protein	2996	3077	g/day
Intestinally available Lys	209	208	g/day
Intestinally available Met	74	74	g/day
Intestinally available His	77	80	g/day
Intestinally available Leu	236	260	g/day
Intestinally available Ile	146	150	g/day
Total core AA	742	772	g/day
Lys:Met	2.83	2.82	
RUP	41.6	43.2	%CP
RUP	6.67	6.75	%DM
RDP	58.4	56.8	%CP
RDP	9.37	8.89	%DM
CP	16.0	15.6	%DM
aNDFom	31.0	30.8	%DM
Starch	27.4	28.3	%DM
Sugar	3.6	3.5	%DM
Total unsaturated FA	2.93	2.60	%DM
RUFAL	762	685	g/day
C18:2	514	451	g/day

Output predictions were made using AMTS Version 4.16.8

Original Ration vs. NovaMeal Ration: Shows a 40¢ savings per head per day by reformulating 4.26 pounds of NovaMeal into the ration by reducing bypass SBM by almost half and reducing SBM. Urea was added to ensure adequate rumen degradable protein. Cottonseed was also reduced, and soy hulls were able to be removed completely due to the highly digestible fiber provided by NovaMeal; however, energy booster was added to account for decreased energy coming from fat. Rumen-protected (RP) lysine was also increased to account for less lysine in NovaMeal compared to SBM; however, RP methionine was reduced due to the greater methionine content in NovaMeal which ultimately kept lysine and methionine at requirements.