ARE YOU USING THE NEWEST FEED TECHNOLOGY? WE ARE!

Technology continues to offer new and exciting opportunities to our dairy feeding programs. The dairy industry no longer has the luxury of overfeeding nutrients to meet animal requirements. Renaissance works closely with dairy producers toward achieving their goals and meeting their needs. This includes using the most up-to-date information, technology and tools available to the industry. These tools include:

CPM Dairy

The use of CPM, an advanced "modeling" program developed by Cornell University, the University of Pennsylvania, and the Miner Institute, provides a unique and cutting-edge opportunity with which to 'calibrate' nutritional performance of dairy cows. This program is remarkable in its ability to project maintenance, growth, production and digestibility information. CPM Dairy also takes into consideration many other unique factors that can impact productivity and profitability, such as environmental conditions, age of the animals, and many other management factors. It helps to take some of the "guess work" out of ration balancing and aid dairy producers in being able to better manage their entire herd. The uniqueness of this program takes into consideration all analytical inputs from your home-grown forages, as well as all feedstuffs available on the farm. A sub-model within CPM Dairy helps to address environmental concerns by estimating and addressing excretions of N and P.

Cost ($)	6.24	IOF ($)	7.26		
DMI (lb/d)	53.6	Model	56.3	% Model	95.2
ME Bal (mCal)	0.0	CP (%)	17.4	NDF (%)	32.5
MP Bal (g)	3.8	RUP (% CP)	39.7	ForageNDF (% NDF)	78.7
NP / MP (%)	64.9	LCFA (%)	3.3	ForageNDF (% DM)	25.6
BactMP (% MP)	51.2	EE (%)	4.1	peNDF (%)	26.0
Rumen N Balance				Lignin (%)	3.1
Pept (g)	30	Pept & NH3 (g)	96	NFC (%)	41.8
% rqd	115	% rqd	125	Sil Acids (%)	3.9
Amino Acid Balance				Sugar (%)	5.0
Met (g)	15.8	Lys (g)	27.7	Starch (%)	26.7
Met (% rqd)	131	Lys (% rqd)	117	Sol Fiber (%)	6.2
Met (% mp)	2.37	Lys (% mp)	6.86	Lys:Met	2.90:1

Possible production due to ME and MP

	Milk(lb)	Fat (%)	TP (%)	Milk(lb)	Fat (%)	TP (%)
Trg:	90.0	3.80	3.10	90.0	3.80	3.10
	Yield Constant			Composition Constant		
ME:	90.0	n/a	n/a	90.0	3.80	n/a
MP:	90.0	n/a	3.11	90.2	3.80	3.10

Adjustments based on Rulquin AA Ratios:

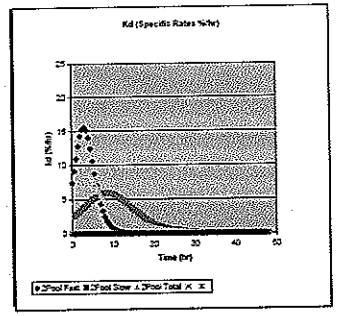
	90.0	n/a	0.02	0.7	3.80	3.10

n/a - Equations not available

Ration DM (%)	48.69	Forage (% DM)	56.14

In Vitro *Gas Analysis*

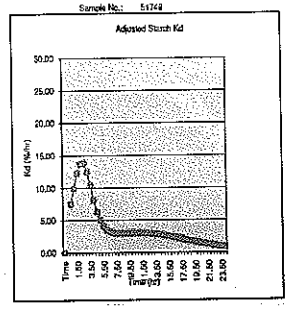
Gas I*n Vitro* is a tool that Renaissance Nutrition uses to analyze the rates at which rumen bacteria breakdown forages and grains. Utilizing technology developed in part by Cornell University and other research facilities, we are able to analyze forages and feedstuffs to determine the best ration composition for health and performance. We can also use this technology as a diagnostic tool to test TMR samples and reveal opportunities that may enhance performance. These opportunities may not be evident by regular lab analysis.



Most digestibility analyses determine a 30- or 48-hour (1 time-point) disappearance to estimate fiber (dNDF) digestibility. However, this unique gas *in vitro* technology delivers 2900 time-points of information over a 48-hour period, far exceeding the single time-point analysis commonly utilized in standard digestibility analyses. The information obtained from the Renaissance Nutrition gas *In Vitro* technology allows us to find opportunities that may help to improve your bottom line, while making more informed decisions when developing diets.

Gas *In Vitro* technology helps us work toward the following goals:

- ☐ Improve Production
- ☐ Improve Feed Efficiency
- ☐ Improve Microbial Protein Yield
- ☐ Ensure Rumen Health
- ☐ Optimize Forage Utilization
- ☐ Optimize Feed Cost
- ☐ Promote Peak Milk
- ☐ Optimum components
- ☐ Promotes 'microbial coupling' – resulting in increased feed efficiency.



Z-Box

Another new tool is the Miner Institute ZEN-NOH Z-Box. This is designed to measure the physically effective NDF or the feedstuff's ability to stimulate cud chewing. Using this measurement better reflects the health of the rumen environment, milk production and components. Balancing diets on peNDF is a superior technique to formulation only with NDF or Forage NDF that ignores the physical characteristics of the feedstuff. In combination with gas technology our nutritionists can generate estimates of forage fragility and stability of the rumen fiber mat before a ration is fed to the cow.

Upcoming Technology

Renaissance continues to work with university and industrial researchers to develop on farm tests to better predict starch disappearance rates by rumen bacteria, enhance fiber digestion, improve starch fermentability, and lower production costs by formulating for improved microbial efficiency.

Your Success!

Interested? Whether you are a producer looking to advance your dairy or someone looking for an opportunity to move your career possibilities ahead... contact us! Let us share with you some of the many possibilities that can make a real difference for your herd or career.

W-S Feed is committed to using the most advanced, up-to-date methods and technologies, and bringing these to producers throughout our marketing area. We're committed to your success!

Join the growing number or producers and nutritionists who recognize what W-S Feed has to offer. Contact us today!