

Looking At Dairy Nutrition From A Different Angle



By Brian Hoffelt, B.S.

As a Crystal Creek® nutritionist, I have the opportunity to look at rations that other companies in the industry have balanced. These rations typically have a few pitfalls in common. I find that the industry usually feeds excessive bypass nutrition and doesn't properly support

the cow's rumen for optimum rumen fiber digestion. University research and data that is showcased in major industry publications generally supports this way of feeding a cow, so the industry follows. When you look at nutrition with a critical eye and evaluate the biology of a cow, it is hard to understand why cattle are fed this way. The simple fact is that a dairy cow has a rumen, her digestive system is designed to ferment forage, and will do so very efficiently if the ration supports rumen

fiber fermentation. This is one key point of difference that sets the Crystal Creek® Dairy Nutrition Model (CCDNM) apart from common feeding programs.

In April of 2013, I started a family owned organic farm in Stanley, WI on the CCDNM. The farmer was frustrated because he had been told, that as an organic farmer, he could only expect to have a tank average of 50 to 60 lbs. He knew that there was money left on the table with his previous nutrition program, so he decided to look to Crystal Creek® for direction. Herd health, body condition and profitability were all areas to improve upon with this herd, so we decided to move forward with a strategic plan. The following is an example of what can happen to an operation when we switch gears from a ration that focuses on bypass nutrition, to a focus on supporting enhanced rumen function.



When we initiated the CCDNM strategy, we knew that this project was going to take some time, because of the significant difference between the two nutrition programs. Over the first 6 months we were able to slowly change the ration to a more rumen friendly point as the cows showed us positive response. We relied on the main on-farm ingredients for improved rumen function including soluble protein, sugar, and a more rumen friendly mineral formulation. When basal ingredients are in the correct balance, we typically see that the rumen becomes a more efficient location for fiber fermentation and the microbial population in that rumen flourishes. As microbial populations in the rumen increase, the cow receives more dietary protein from the higher level of available microbial protein that leaves the rumen and is absorbed in the lower digestive tract. Because of this added efficiency we were able to take the ration Crude Protein down from a 17% to a 16.5%. The cows also moved up on Dry Matter Intake (DMI) from 51.25 lbs to 55.5 lbs. As DMI increased and the cows were able to utilize more forage in the diet, the ration became more efficient, and the herd's production came up nicely from its typical 58 lb standard, to 71 lbs. Milk production continues to improve.

A year into this team project, we continue to see improvement in the herd. We have made a lot of forward progress with the cows, and we are continuing to work together as a team to move the herd closer to the targeted goals. Our current project is to focus on transition cows. Some cows are not peaking like they should at 60 days in milk. By graphing individual cow's production curves we are able to determine which cows might have sub-clinical ketosis. Once sub-clinical ketosis is identified, we can put a strategy in place to treat high risk cows before it negatively impacts health and production. We continue to focus on a preventative strategy with the dry cow ration as well.

This herd is an example of what can happen if a sound nutrition strategy is put in place and there is a good team effort between the producer and nutritionist. By setting goals and working on the CCDNM nutrition project together, we were able to improve profitability by \$20,440 on 50 cows in the first year alone. The

HERD RESPONSE		
	Previous Ration 4-22-13	Crystal Creek® Ration 2-28-14
Milk Production	58	71
Milk Butterfat	4.12	4.00
Milk Protein	2.85	3.10
Somatic Cell Count	100,000	120,000
Milk Urea Nitrogen	11	10
Body Condition Score	Poor	Good
Dry Matter Intake	51.25	55.5
Hairy Warts	10 of 50 = 20%	1 of 50 = 2%

TOTAL RATION PROFITABILITY		
	Previous Ration 4-22-13	Crystal Creek® Ration 2-28-14
Total Ration Cost/head/day	\$8.01	\$10.79
Ration Cost/50 head/day	\$400.50	\$539.50
Total Ration Cost/Year	\$146,182.50	\$196,917.50
Ration Cost Difference		-\$50,735
Additional Milk Income (\$30/cwt Organic Milk Price)		\$71,175
Added Income Over Feed Cost / 50 Cows		+\$20,440
Added Profit/head/year		+\$408.80

farmer was able to purchase a new TMR mixer with the added profit that he made using the CCDNM; a tool that has allowed more flexibility in feedstuff management (hay/balage), and has additionally helped to support increased bottom line profit.

Examples like this herd make being a Livestock Nutritionist at Crystal Creek® very rewarding. Crystal Creek®'s unique approach to dairy nutrition works to consistently improve profitability for our clients. Call today to see how the Crystal Creek® Dairy Nutrition Model could be applied to your herd.