



# The Perfect Organic Dairy Nutritionist

by *Mary-Howell R. Martens*

**A**t Lakeview Organic Grain, a feed mill working solely with organic farmers, we are often approached by conventional dairy nutritionists who wish to work with our farmers. While many New York organic dairy farmers would certainly benefit from the services of an appropriately skilled nutritionist to improve their profitability and management, too often the salespeople visiting the farms are not suitably skilled. A conventional high-input mindset that merely substitutes organically approved minerals is not what most organic dairy farmers need. Sometimes it is hard to effectively explain to these folks why organic farming is *not* simply “conventional lite,” with approved materials in place of the prohibited ones. Organic farming instead requires an *entirely different evaluation of goals and outcomes*, and for a nutritionist to be truly valuable, they must understand this from the start.

In order to better explain to these instant organic experts what is really needed, I recently polled Northeast organic dairy farmers, both personally and over the organic dairy community e-mail forum Odairy (see [groups.yahoo.com/group/Odairy](mailto:groups.yahoo.com/group/Odairy)). Most of those responding are doing a superior job at organic dairying — they are well educated and knowledgeable, they graze their cows intensively, buy little from off-farm, have healthy cows and really don't need the services of a consultant. In the overall population of organic dairy farmers, however, there is a whole range of approaches and attitudes — we certainly sell feed to many different types of farms. Most are excellent, but some are marginal in success and cattle health, some are buying a large amount of grain feed and minerals because they have insufficient and poor-quality forage, and many are pretty insecure about their own ability to feed and manage their animals. For them, a skilled and ethical nutritionist can be of significant value and assistance.

The responding farmers stressed that an effective nutritionist needs to be aware of the factors determining

profitability on an organic dairy farm. They should place a strong emphasis on grazing/forage management, and should be able to change the focus from making milk to making money using as many on-farm resources as possible. Farmers also stressed the need for a nutritionist who can understand and use appropriate diet and supplementation to proactively prevent many health problems. Most farmers also emphasized the need for a nutritionist who both understands and respects the requirements and the intent of the organic standards.

The consensus was that the “perfect organic nutritionist,” rather than being primarily a mineral salesperson, should be much more of a whole-farm consultant, evaluating the farm as a whole and maximizing the use of on-farm produced high-quality feed, while identifying and enhancing management factors that promote and improve animal health and welfare.

1. *An organic nutritionist should first and foremost be an experienced grazing/forage specialist.* Because organic dairy farmers include pasture as a significant portion of their ration during the grazing season and because pastured animals are much less likely to need the kinds of medical intervention common in confinement operations, forage must be the very core of all nutritional planning on an organic dairy farm.

Dairy nutritionists should effectively advise on pasture management/evaluation, rotational grazing, and soil fertility management, as well as hay/baleage agronomics, harvest, storage and feeding. They should be able to evaluate the nutritional value of the pasture and hay fields using observational skills combined with forage sampling as it changes over the course of the season, even over the course of a few weeks. They must have the skills to fully integrate pasture management with other nutritional information and materials to optimize body condition, milk production, reproduction and herd health.

This obviously goes far beyond just taking forage samples and plugging the values into a canned computer program. Instead, the goal should be to guide the farmer to improve their forage quality and quantity through both improv-

ing existing fields and establishing new stands. Knowledge of innovative forage species mixes, such as forage brassicas, small grains, field peas, BMR sorghum sudangrass, and diverse pasture mixes would certainly be valuable.

One New York grazing dairy specialist responded, “While I’m working with conventionally minded nutritionists, I feel like they are genuinely listening and are interested. However, without fail, shortly after I leave, they seem to forget everything I taught them. They overfeed protein, feed too much of the forage inside the barn, don’t sample pastures so they can use lower ‘book values’ in their

As important as forage is, Dr. Hue Karreman, a veterinarian in Pennsylvania who works with many organic dairy farms, pointed out that solely grazing, without also supplying the right amount and kind of energy and supplements at the right times, can cause serious problems on organic dairy farms. Indeed we have seen the results of this when farmers attempt to cut the grain out of their ration to save money and then see their production plummet because forage quality isn’t sufficient. Identifying and supplying additional nutritional requirements, in the context of the whole farm with a close eye on the economics

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computer programs, and so on. Conventional nutrition is so ingrained in them that many of them can’t or won’t change how they go about things. Anyone who wants to work with organic dairy farmers will need to completely change their mindset and un-learn much of what they assume in conventional nutrition.”

Ideally, as much as possible, minerals should come through the forage, from the soil. Health starts in the soil, and minerals obtained from the soil in forage are much more easily assimilated — and much *cheaper* — than minerals purchased in a bag. A good nutritionist should be able to help farmers make the important, but often overlooked, connections between specific soil nutritional characteristics and animal health/production, and advise how to (short term) supplement the cows with purchased inputs and (long term) supplement the soils to produce better quality forage that supplies as many of the missing nutrients as possible. Specific soil/forage nutrient availability — especially micronutrients such as Cu, Zn, Se, S, B and Mn — and their apparent connection to certain health issues is often not adequately evaluated and addressed in a conventional agriculture mindset.

and profitability, is a challenging but very important role that an organic dairy nutritionist needs to fill.

Organic dairy farmers also mentioned their need for nutritionists who understand the unique demands of seasonal herds. Some farmers said they felt ridiculed by nutritionists for choosing a seasonal approach, even though it made sense on their particular farm.

2. *The measure of success on an organic farm is different than on most conventional farms.* Making money and making milk are *not* necessarily the same thing! The measure of success on many conventional dairy farms is often simply to maximize milk production at the expense of nearly everything else. One farmer said that the last conventional nutritionist who offered to “blow the covers off his milk tank” with more milk sealed his fate when the farmer then added up how much more it would cost to feed the cows the new ration. Many organic farmers are very aware that cows that can convert lower-quality feed into adequate milk can often be more profitable than cows that need expensive “race car” feed to achieve top production. When organic soy meal is over \$1,000/T, perhaps it makes more economic sense

to feed less protein and take what milk you get, rather than feeding for highest production. Often a farmer can see a greater economic advantage when they don't push their cows — they have fewer health issues, lower vet bills, a lower culling rate, and longer herd longevity. While some purchased off-farm inputs are still likely to be needed, they should not be the primary focus of the nutritionist.

Farmers also called attention to the fact that cows produce three types of income — milk, calves and meat. Focusing on milk production at the expense of reproduction, fertility, calving interval, condition of feet and legs, and health,

profit to the farm. Successfully managing a herd to promote such longevity is a valuable skill. Perhaps when evaluating a new nutritionist, we should ask to see their herd with *the oldest cows*, rather than their highest-producing herd.

3. *Managing to promote animal health rather than to treat disease.* Organic dairy farmers can't use antibiotics, so therefore a primary nutritional and management goal must be to create an environment that reduces stress and addresses potential health problems proactively, *before* they need treatment. We like to call this thought process "thinking upstream," seeking out root causes rather than treating symptoms. Because nutrition has

whether silage predisposes cows to health problems such as twisted stomachs and foot problems. Silage in a ration does often require additional expensive protein feed, and some farmer respondents questioned whether feeding silage actually pays because of this, especially in the winter with expensive protein grains.

When asked whether a nutritionist should advise on treatment of acute medical problems, such as mastitis and scours, there were widely divergent opinions. The farmers indicated that because organically inclined vets are hard to find, an organically experienced nutritionist can often be far more useful and knowledgeable than a conventionally minded vet. However, one of the vets polled had serious concerns that a nutritionist, not trained in medicine, should not be dispensing medical advice, even if it is homeopathic.

4. *Nutritionists should have a full understanding of and respect for the requirements and the intent of organic standards.* Many organic dairy farmers are impatient with nutritionists who seek to cash in on the organic movement by merely producing an organically approved mineral and then changing nothing else in their decision-making or personal knowledge. We are especially uncomfortable with nutritionists who don't personally believe that organics is "for real" even as they eagerly sell their products to organic farmers. We need nutritionists who know the organic standards, understand what they mean on each farm, and work with the farmer to maximize their sustainable profit firmly within the rules. "Input substitution," or simply replacing prohibited materials with approved materials while changing nothing else, is often a recipe for failure on organic farms.

Indeed, one respondent said that it would not be unreasonable to expect a nutritionist working with organic dairy farms to read the organic standards at least once a month and to regularly attend organic meetings to enhance their knowledge and skills of organic agriculture as a system, especially pertaining to soil fertility management. If nothing else, doing this will lend valuable credibility to the claim that the nutritionist honestly wishes to serve organic farm-

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especially if the overall costs exceed the overall income, isn't a positive long-term goal for most organic farms. One farmer commented that hoof condition is one of the best ways to evaluate rumen health and adequate nutrition. Putting priority on selling healthy organic calves, bred heifers, steers for meat, and bulls for breeding can add valuable income to a farm. For this reason, farmers felt that nutritionists should regularly observe not just the dairy cows, but also the young stock, and manage nutrition for optimal condition of those animals also.

While the connection between milk per cow and overall farm profitability is sometimes tenuous, there is a very strong connection between cow longevity and farm profitability. It costs quite a lot of money to raise a calf up to the time she starts producing milk, and those costs are higher on organic farms because the calf gets organic milk and organic feed. Once the cow starts producing, every additional lactation and every calf she produces adds profit. An older cow on well-mineralized soil can eat mostly forage and therefore has lower feeding costs. She has already recouped her cost of being raised and is returning mostly

such a profound, but often underrated and incompletely understood, impact on so many diverse health conditions, the appropriate skills of a nutritionist on an organic farm become particularly critical.

Many organic farmers are starting to realize how important it is to identify and minimize animal stress, both internal (nutritional status, chronic health issues, parasites) and external (physical facilities, pasture quality, handling). Usually, stressed animals will exhibit subtle low-grade symptoms that often go unnoticed until an acute reaction sets in. Because the available organically approved remedies may have difficulty treating serious acute disease, it is far more important to address the effects of chronic and intermittent stress early. Dr. Ann Wells, a veterinarian in Arkansas, has developed a very useful scorecard for evaluating the stress load per animal in a grazing herd, and then identifying the different causes. Her perspective on acute Johne's as a condition that is often stress related is especially thought-provoking.

There is a lot of discussion amongst organic dairy farmers about the value or risk of feeding corn silage, especially

ers, and demonstrate an often-needed humility by admitting that they don't "know it all" when it comes to organics. It is also recommended that nutritionists be in contact with the certifier(s) that their clients are using to stay updated on organic production standards and the use of allowed and prohibited materials for land and animals.

product on customers by recommending certain types of rations. We'd rather that choice be made by the customer with a full understanding of what the real costs are, and why.

As an organic feed mill manager and an organic farmer, periodically I am asked to "pre-review" an animal supplement label for red flags before it is

able to use complex byproducts such as bakery waste, beet pulp, feathermeal and cottonseed meal, most of which are not available in organic versions.

Ultimately, it comes down to learning how to think like an organic cow who enjoys a long, healthy, comfortable life of fresh, plentiful grass, sunshine, low stress and good-tasting, wholesome feed



5. *How much should organic dairy nutritional services cost?* Not surprisingly, farmers had strong opinions on this question. One organic dairy consultant said that the farmers she works with seem to prefer a flat fee, perhaps \$100 per month, which will cover ration work, at least one visit a month, phone consultations, and forage/feed samples as needed. They would prefer to purchase the basic mineral components such as salt, lime, bicarb, Dical and Mag-Ox inexpensively and then purchase a concentrated mineral premix with as little carrier as possible, either to be mixed in their feed or fed free choice. While many feed mills hire staff nutritionists and many farmers do value this service, at Lakeview we prefer to work with independent nutritionists to avoid the appearance of our feed mill pushing extra-expensive

submitted for certifier approval. This is really the easy part, identifying the "shalt nots." In general, the one item most likely to cause problems is mineral oil, often added for dust control. After that, all agricultural products (such as wheat midds or soy hulls used as a carrier) will need to be organic, with no petroleum-based products or animal byproducts allowed, any "flavorings" clearly described and approved, and any ingredient containing yeast or enzymes bearing a non-GMO statement, since many commercially produced yeasts now are genetically modified. More difficult is explaining to a conventional nutritionist the value of products such as kelp as valuable sources of trace minerals when the concept of prohibiting synthetic mineral and vitamin sources is totally foreign. Many still want to be

while still producing a decent income for her farmer. If the consultants we work with can achieve this, then indeed they are worthy of being called "organic dairy nutritionists."

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Watch next month's issue for Mary-Howell Martens followup article, "(Almost) Year-Round Grazing in the Northeast."