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The National Organic Program Intent, Implementation & Impact for the Dairy Producer

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ABSTRACT

Organic as a descriptor for food in the United States and internationally is a term that lends itself to multiple interpretations and thus potential confusion. With dictionary definitions ranging from “derived from living organisms” to the chemistry focused “of or designating carbon compounds”, it is not surprising that there is substantial confusion about what “organic food” really is and what it means. Recognizing this, and the potential for consumer confusion and mistrust of the designation, Congress directed the United States Department of Agriculture (USDA) to develop a set of organic standards in 1990. Starting with this directive, the USDA established the National Organic Standards Board in 1993 which helped develop the first proposed regulations in 1997. This worked its way into final regulations in 2000 as the National Organic Program (NOP), specifying producer, processor, retailer and marketer requirements. Now in full implementation since 2002, the NOP is impacting both organic and conventional food systems as companies strive to identify when “organic” is a valuable and meaningful marketplace differentiation and when it is not. With annual sales growth of nominally 20% since 1999 and total sales of \$10.4 billion in 2003¹ (\$1.4 billion in dairy products)², organic foods are one of the few rapid growth segments in the food industry. The following provides an overview of the NOP, the requirements it places on all those involved in the production, marketing and selling of organic food products and some of the specific challenges faced in organic dairy production.

DEFINING THE NATIONAL ORGANIC PROGRAM

The NOP is codified through a series of regulations which are detailed in the Code of the Federal Registry³ in

. These guidelines can be succinctly summarized as:

- a facility has an organic plan;
- the plan has been certified by an authorized body;
- the facility documents how it complies with its certified plan;
- the facility complies with the National List for use of all materials at the facility;
- all aspects of the plan are either available for, or have already been, audited;
- “organic” labeled products comply with NOP labeling requirements.

The NOP is basically a combination operating, performance and labeling standard, not that different from those promulgated by the International Standards Organization (ISO), with the

specific aim of ensuring that products labeled as grown, produced or further processed as “organic” meet a specific set of guidelines. Organic certification is required of any operation if products are “sold, labeled or represented” as organic in the United States unless annual gross sales are less than \$5,000 or the operation handles but does not process the food (distributors, retails markets, etc.). The following summarizes the most relevant aspects of the NOP.

The National List is the list of approved substances and applications of those substances for use in organic agriculture⁴. The basic philosophy of the National List is that all natural materials are allowed and synthetic materials are only allowed with specific limitations and generally only when there is no natural alternative. Confusingly, materials can have different approval status by process of manufacturing or use with the same basic structure. For example, glycerin from fat/oil hydrolysis is allowed while glycerin from petroleum refining is not allowed.

For dairy production and processing the National List is just one important aspect of the NOP. The various NOP requirements often result in both increased cost of operations and reduced flexibility in managing an organic operation when compared to its conventional counterpart. At a simplistic level, the implementation of an organic production and processing plan and its concomitant required recordkeeping, material sourcing and auditing provisions result in a slightly higher cost of operations. At some facilities, however, they have found that there are cost savings in improved efficiency which offset some of these costs. Some of the more unique implications of the NOP at the dairy farm level show up in basic approaches to herd management.

The National List’s strict controls on what substances can be used in organic operations translate into a fairly wide ability to utilize preventative biologic approaches such as vaccines with a comparably limited ability to implement chemical/medical interventions when problems arise. In dairy farming, the need to focus on an aggressive vaccination and herd management preventative health approach is driven by the relatively limited interventions for treatment allowed via the National List. On the NOP National List, approved synthetic materials, which would normally encompass both animal specific treatments and environmental treatments, are limited to:

- As disinfectants and sanitizers:
 - Alcohols including ethanol and Isopropanol, prohibited as a feed additives;
 - Chlorine based sanitizers so long as residual chlorine levels do not exceed the Safe Drinking Water Act’s maximum residual disinfectant limit;
 - Phosphoric acid for equipment cleaning so long as no direct contact with organically managed livestock or land occurs;
 - Hydrated lime for external pest control only.

- As medical treatments:
 - Aspirin for health care use to reduce inflammation;
 - Biologics and related vaccines;

- Chlorhexidine for surgical procedures conducted by a veterinarian;
- Chlorhexidine for use as a teat dip when alternative germicidal agents and/or physical barriers have lost their effectiveness;
- Electrolytes-without antibiotics;
- Glucose;
- Glycerin teat dips produced through the hydrolysis of fats and oils;
- Hydrogen peroxide;
- Iodine and copper sulfate as topical treatments, external parasitides or local anesthetics as applicable;
- Magnesium sulfate;
- Oxytocin for use in postparturition therapeutic applications;
- Parasticides (Ivermectin) for emergency treatment - milk or milk products from a treated animal cannot be labeled as “organic” for 90 days;
- Lidocaine/Procaine as local anesthetics with a 7 day withdrawal period;
- Mineral oil for topical use and as a lubricant;
- As feed supplements or additives:
 - Milk based feed supplements and milk replacers without antibiotics for emergency use only, no nonmilk products or products from BST treated animals;
 - Limited use of DL – Methionine and DL-Methionine - hydroxy analog;
 - Trace minerals for enrichment or fortification when FDA approved;
 - Vitamins, used for enrichment or fortification when FDA approved.

What are not on this list are many of the tools used by bovine practitioners in dealing with individual cow and overall herd health. Those that are still allowed can include such extensive withdrawal periods that they are both logistically and economically impractical for most farms. In order to meet the NOP requirements, consumer expectations and economic viability, a focus on preventative veterinary medicine is necessary. An additional herd and animal health management implication is that the NOP requires the use of forage as a major constituent of dairy animal feed. This, combined with the requirement that internal confinement is very restricted, forces very different herd management practices.

NOP production also places very specific requirements on the origin and management of the dairy herd. For organic dairy production, animals must be under continuous organic processing for one year, unless the:

- Whole herd is on 80% organic feed for 9 months and 100% organic for 3 months
- Breeding stock from non-organic farms are brought onto the farm before the last 1/3rd of gestation

All of these, and the more detailed requirements of the NOP, mean that for a dairy operation to move to organic processing is a significant commitment of focus and resources that importantly incorporates the bovine veterinary practitioner as a partner. Motivation for such a change is that, based on current market dynamics, success in managing an organic dairy operation can mean greater profitability than a conventional dairy farm, as organic dairy market premiums can be 50-100%⁵. Such success is not, however, guaranteed.

NATIONAL ORGANIC PROGRAM – MARKET DYNAMICS

One of the most important things in reviewing the NOP is to understand that, while it has come up with a set of common regulations for what it takes to be labeled “organic”, different stakeholders have very different interpretations of what that really means. The base definition used by the USDA is that organic foods are produced using: “Production practices that maintain or improve the natural resources of the operation, including soil and water quality.”⁶

This definition matches very well to the FAO definition of: “A system that relies on ecosystem management rather than external agricultural inputs.”⁷ These definitions, however, are often very different from what consumers, those for whom the NOP was developed to benefit, believe organic to mean. While many consumers believe organic foods to be better for the environment, which is an obvious implication of the definitions of USDA and FAO but not a certainty or a requirement, consumers often also have a perception that organic foods are higher quality, more wholesome, safer and more supportive of family farming, among other benefits. In practice, organic labeling and real or implied claims do not make it easier on consumers to understand exactly what the benefits are. The NOP labeling guidelines include three different standards for the use of the word “organic”:

- 100% Organic
 - Full compliance
 - May use USDA seal
- Organic
 - At least 95% organic, excluding water & salt
 - Remaining materials on the Nation List
 - May use USDA seal
- Made with Organic Ingredients
 - From 70% to 95% organic, excluding water & salt
 - Can not use USDA seal
- Organic ingredients
 - Specific to the ingredients identified
 - On the ingredient label only
 - Can not use USDA seal

Adding to potential consumer confusion, organic food companies and trade associations often either directly claim or imply additional benefits for “organic” not included in the NOP. Examples of these include:

“We're committed to healthy food, healthy people and a healthy planet.” – Stoneyfield Farms.⁸

“Organic foods are known and appreciated for their superior taste and quality, but there are many additional reasons to “go organic.” Health, community, and environment are the primary concerns of the approximately three million consumers who bought organic foods in the United States in 2004.” - Organic Valley Family of Farms⁹

“Organic production reduces health risks” - Aurora Organic Dairy¹⁰

“Organic agriculture protects the health of people and the planet by reducing the overall exposure to toxic chemicals from synthetic pesticides that can end up in the ground, air, water and food supply, and that are associated with health consequences, from asthma to cancer.” - Organic Trade Association¹¹

In addition, with its rapid market growth organic food companies and products are evolving away from the local farmers market to include traditional food industry leaders as major players in the organic marketplace. In the dairy industry, organic labels such as Horizon Organic Dairy (Dean Foods) and Stoneyfield Farms (Group Danone) are examples of this change.¹²

In reviewing the above claims relative to the intended implications of the NOP, a visit to the USDA’s NOP Frequently Asked Questions site is very instructive, including the following question, which helps to illustrate some of the challenges in demystifying “organic” foods today:

Question: Is it safe to say that using organic fertilizers and other organic farming practices is better for the soil and less of a threat to surface water than commercial methods?

Answer: The USDA’s National Organic Program is a marketing program and makes no claims that organic farming is “better” in any respect than conventional farming.¹³

The contrast between organic enthusiast’s claims and the intended implications of the NOP were understood from the outset by the USDA, as indicated by Dan Glickman, the Secretary of Agriculture when the NOP went into force:

"Let me be clear about one other thing. The organic label is a marketing tool. It is not a statement about food safety. Nor is "organic" a value judgment about nutrition or quality."¹⁴

This dichotomy aside, the NOP and organic farming practices are a significant and growing element of the overall food market and the dairy market specifically. For the bovine practitioner it represents both a management challenge and an opportunity to provide specific and value added service to their customers in an important and growing niche for food system companies.

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