

## Organic Dairy Herd Health in Ohio: Conversations with Producers and Veterinarians



### Study Interviewees

#### 23 organic dairy producers

Years of organic production: 1-19, Average 10.4  
19/23 had experience operating a conventional dairy farm.

18/23 were male members of Plain communities.

Herd size: 21-110 cows, Ave. 44.5

Farm size: 50-537 acres, Ave. 154 acres

Ave. daily milk production: 20.2 kg/cow

Herd size and demographics were representative of organic dairy farms in OH, IN, PA, and NY.

#### 12 Veterinarians

4 specialized in organic production.

8 served local dairy farmers, including a few organic clients.

Dairy milk is currently the largest organic commodity by sales. According to the most recent USDA survey, Ohio ranks 4<sup>th</sup> in the number of certified organic dairies and 14<sup>th</sup> in production. <sup>1</sup> Like neighboring states (Pennsylvania, New York, and Indiana), Ohio's organic dairy sector is predominantly small family-owned farms, many of whom are members of Amish or similar Plain communities.

Organic dairy producers have distinct perspectives, approaches, challenges, and experiences when managing herd health, but few studies have documented these. It is important for veterinarians and others who serve the organic dairy industry to understand the specific needs and challenges of managing animal health within organic production systems.

Ohio State researchers used semi-structured interviews to examine herd health management for the organic dairy industry in and around Ohio. Researchers spoke with 23 organic dairy producers and 12 veterinarians who serve organic dairy farms. Interviews examined decision factors relating to disease prevention and treating infectious diseases, along with organic dairy - veterinarian relationships.

### Overall Herd Health

In the Ohio State interviews, **nearly all the organic farmers who had transitioned from conventional practices felt that the move to organic production had improved overall dairy herd health and reduced veterinarian visits and costs.** Two-thirds of the producers reported improved metabolic health (i.e., reduced displaced abomasum (DA), milk fever, ketosis). Many attributed this to a more balanced diet and increased time on pasture.

## Most Frequently Reported Dairy Herd Health Issues

74% reported Mastitis  
 48% .....Lameness  
 48% ----- Fly Control  
 35%..... Calf Diarrhea  
 30% ----- Pink Eye  
 30%..... Pneumonia  
 22%----- Metabolic Issues  
 17%..... Breeding Problems

The most frequently reported disease and management challenges in this study were mastitis (17/23) and lameness (11/23) which is similar to all U.S. dairy farms, as reported by the USDA<sup>2</sup> in “Health and Management Practices on U.S. Dairy Operations, 2014.” Roughly half of the producers also reported fly control as a challenge in need of effective organic solutions.

### Organic Disease Prevention Strategies

Organic producers emphasized a “holistic approach” to animal health and often discussed the importance of healthy immune systems. Nearly two-thirds of producers referenced environmental conditions (e.g., outdoor access, proper ventilation) and animal and

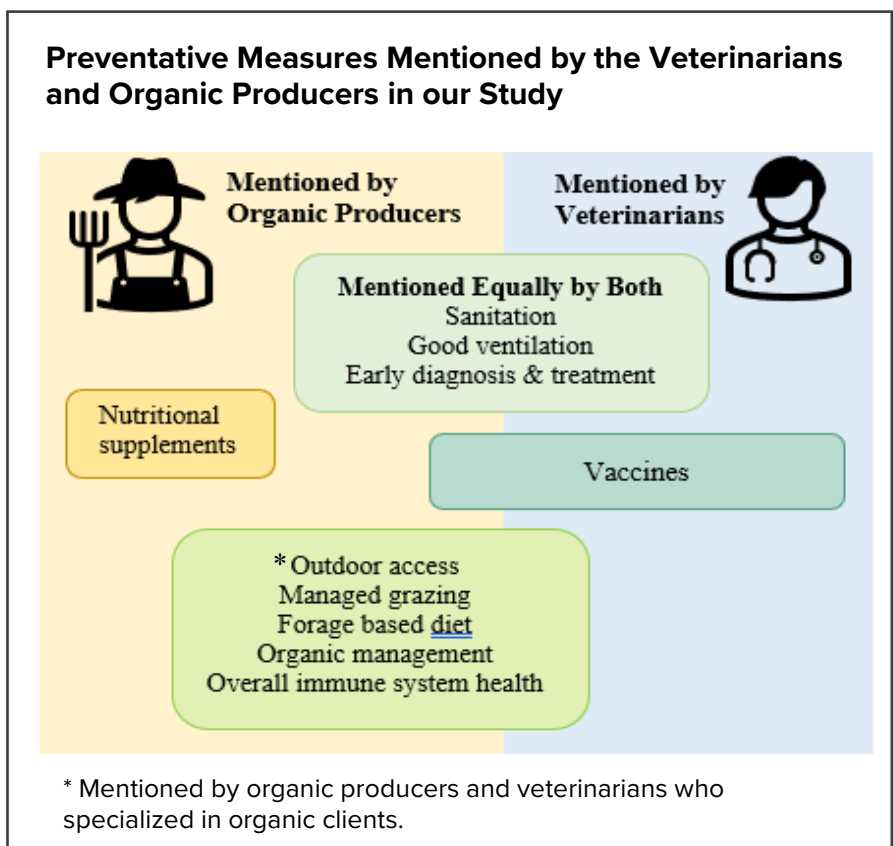
facility cleanliness as important for disease prevention. The holistic nature of organic farming was mentioned often by organic farmers and veterinarians who primarily served organic clients. For example, well-managed rotational grazing practices were thought to contribute to positive soil health practices which were connected to improved nutrition and cattle health.

All veterinarians in this study emphasized the importance of **facility sanitation, proper ventilation, and early diagnosis, and immunization**. Only organic producers and organic industry veterinarians emphasized outdoor access, managed grazing, balanced forage-based diets, and organic practices as preventative strategies.

While not central to disease management, nearly all the organic producers mentioned using **dietary supplements** for disease prevention. These included minerals, vitamins, and probiotics, as well as various immune stimulants, including botanical extracts (garlic, echinacea, cayenne), vinegar, calcium boluses, and commercial products. Producers felt these supplements helped boost the animal’s immune system, promoted feed efficiency, and helped prevent certain health problems. Veterinarians were less likely to mention these supplements as disease prevention strategies, but much more likely than producers to mention vaccines as a preventative measure.

**Vaccines** are allowed in organic dairy operations, but previous studies have shown that vaccines are used less frequently by organic producers.<sup>3</sup> Over half of the farmers interviewed (13/23) reported routinely using at least one type of vaccine on their cows, and eight reported vaccinating calves or heifers as well.

Producers’ attitudes toward vaccines were complex and varied. Overall, many farmers regarded vaccines as a cost-effective way to prevent disease. However, most emphasized that they focused on the overall immune system rather than vaccine use per se. Some felt vaccines were unnecessary unless a disease problem was present in their herd, and a few had safety concerns which led to non-use. While vaccine cost did not seem to be a factor, some producers cited



concerns about the time required to administer the shots, a loss in milk production immediately following vaccination and stress on the animals. When asked to report their top disease-prevention strategies, fewer than eight of the producers listed vaccines among their top three strategies.

## Organic Disease Treatment

Determining if and when to administer antibiotics can create a rather confusing paradox for organic dairy producers.<sup>4</sup> Unlike vaccines, **milk from cows treated with antibiotics is not allowed to be sold as certified organic**. In the U.S., any animal treated with antibiotics must leave organic production permanently under USDA National Organic Program (NOP) rules. At the same time, the U.S. NOP standards prevent producers from withholding antibiotic treatment if it is necessary to promote animal welfare or save the animal's life. For cases of metritis, mastitis, lameness, and respiratory infection, organic producers face difficult decisions and struggle to balance potential animal welfare with economic concerns.

Given the negative consequences associated with antibiotic use, most producers and organic industry veterinarians work to sustain organic dairy herd health without the use of antibiotics except in isolated severe cases. The majority (61%, 14/23) of producers reported using antibiotics at least once, more commonly for respiratory disease than for mastitis. The first course of mastitis treatment for almost all producers was stripping affected quarters. Many also used various topical treatments and dried off the affected quarter, if needed.

**Common Treatment Products Reported by 23 Ohio Organic Dairy Producers** The producers in this study reported using the following products to treat common diseases in their organic herd. Specific commercial products mentioned are available in the full report.

Product <i>With # of herds who reported using each.</i>	Mastitis		Metritis		Respiratory Disease	
	#Herds	Routes <sup>1</sup>	#Herds	Routes	#Herds	Routes
Essential Oils	18	Topical, IMM	7	InVulva, Infusion	0	--
Tinctures (cayenne, echinacea, garlic)	2	Oral	6	Oral	9	Oral
Microbial products	4	Oral	1	Oral	6	Oral
Multivitamin or multimineral	4	Oral, IV, SQ	5	InVulva, Infusion, Oral	2	Infusion
Aloe Vera	1	Oral	6	Oral, Infusion, InVulva	4	Oral, Infusion
Antibiotics	3	N/A	0	--	7	N/A
Vitamin C	3	SQ			5	Oral, SQ
NSAIDs	2	Oral, IV	4	Oral, IV	2	Oral, IV
Whey-based products	2	SQ	1	InVulva, Infusion	0	--
Botanical preparations	2	IMM	0		0	--

<sup>1</sup>Routes: IV = intravenous; SQ = subcutaneous; IMM = intramammary

## Common Organic Treatment Strategies for Major Dairy Cow Health Problems

**Mastitis:** Stripping the affected quarter (all farms) and application of a topical treatment like peppermint or tea tree oil (18/23 farms).

**Lameness:** Almost all producers used basic cleaning with water or hydrogen peroxide as a first treatment. Most producers (16/23) also soaked or sprayed affected hoof with a mineral-based product such as copper sulfate or magnesium sulfate.

**Fly Control:** Topical treatments or sprays were most common, but producers reported they were time-consuming to apply. A few producers reported success using ducks or chickens to reduce the number of flies or with using better management of manure or rotational grazing.

**Calf diarrhea:** 36% of the interviewed producers gave First Defense Calf Boluses to all heifer calves at birth.

**Respiratory Illness:** This was the illness most likely to be treated by organic producers. See the table for other alternative treatments.

**Metritis:** Producers frequently reported providing warm water to all cows after calving as a preventative measure. When metritis did occur, producers flushed the uterus with various products including aloe vera, tinctures, essential oils, and mineral-based products.

## Veterinarian-Producer Relationships

Although organizations like Organic Valley encourage producers to cultivate relationships with local veterinarians, organic producers felt local professionals are not always knowledgeable of organic practices or regulations. This research found that local veterinarians were consulted for diagnostics, vaccine recommendations, and acute cases of diseases, rather than for long-term or overall management.

All veterinarians in the study mentioned that their formal training generally did not encompass organic herd health, and sporadic consultations with a small number of organic clients limited their opportunities to learn more. Veterinarians discussed how a lack of information on alternative treatments (safety, efficacy, dosage, withdrawal times, etc.) and varying organic rules reduce their confidence in treating organic dairy.

Organizations that serve the organic and/or dairy industry, such as Organic Valley, Ohio Ecological Food and Farm Association, American Veterinary Medical Association (AVMA), or American Association of Bovine Practitioners (AABP) could partner to offer programming for veterinarians in Ohio and beyond, such as the webinar series designed by OEFFA and Ohio State in 2014. These programs could focus on regional clusters of Ohio organic dairies and possibly be expanded to surrounding states in partnership with neighboring land grant universities and other nonprofits who serve organic agriculture.

## References

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To request hard copies of the full study report, journal article, or this summary contact Cassy Brown at the OSU OFFER program, 330-263-3634, [brown.1844@osu.edu](mailto:brown.1844@osu.edu).

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