

# Organic Milk Production



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Consumers are becoming increasingly interested in knowing how and where their food is produced. In 1900, 50% of Americans lived on farms, and 33% of workers were employed on a farm. Now, only 2% of Americans live on farms and <1% claim farming as their occupation. This disconnect from agriculture creates confusion among consumers on typical farming practices. When surveying consumers on their dietary objectives, 44% reported they want natural and/or organic products and 63% percent of people viewed antibiotic use as negative. More consumers are purchasing natural or organic products and minimally processed foods. Within the past year, conventional fluid milk sales have decreased by 6.2% and organic fluid milk sales have increased by 5.6%, influencing more producers to consider organic production. Aside from the increased demand, producers pay price for organic milk is higher than the pay price for conventional milk.

Certified organic US dairy herds have increased to 5.4% in 2016 from 3.0% in 2011. **In 2016, Kentucky was in the top 20 states for number of organic milk production farms and value of sales**, with nearly 5.7% of Kentucky dairies as organic and another 5.7% transitioning.

## **Who oversees this?**

The USDA oversees the National Organic Program. It was first introduced in the 1990 Farm Bill but not fully implemented until 2002.

## **What is and is not allowed for organic production?**

Restricted:

- Hormones for reproductive synchronization
- Genetically Modified Organisms (GMOs)
- Growth influencing hormones
- Pesticides
- Ionophores
- Other synthetics (unless on permitted list)

Permitted:

- Artificial Insemination (AI)
- Vaccines
- Parasiticides (only for emergency treatment and restricted for slaughter animals)
  - Ivermectin is being removed from the approved synthetic substances list, current milk withdraw time is 90 days

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Lameness: Should it be a Priority for your Herd?

### **What are the basic requirements for organic livestock production?**

Organic cattle must be fed 100% organic feed and grazed on organic pasture. Cattle must have access to pasture at least 120 days/year, consuming 30% of their dry matter intake from pasture during those times. Cattle must have access to shade, shelter, fresh air, clean water, and direct sunlight. Their habitat must also allow for exercise and the exhibition of natural behaviors.

### **How long does it take to become an organic producer?**

If an organic producer is purchasing cattle, they must be managed organically for the last third of gestation to qualify as organic. If a whole herd is transitioning to organic, the cattle must be under organic management one year prior to the sale of their milk products as organic. If a whole farm (land and cattle) is transitioning to organic production, there is a mandatory 3-year transition period prior to organic labeling. It is permitted that if the land and livestock are transitioning together, (whole farm) cattle may be fed the crops from the last year of land transition and still qualify as organic the following year, despite the crops being unable to sell as organic (have not completed the 3-year transition). During the 1- or 3-year transition, producers operate as an organic farm, regarding pasture and cow management, but are restricted to sell their products as organic until the end of the transition period. Therefore, the farm incurs potentially increased costs and lower milk production without an increased milk premium for an organic product.

### **How do organic producers manage health without antibiotics?**

- Genetics:
  - Selecting superior health and fitness trait animals
  - Choosing a breed to compliment the environment
- Proper nutrition
  - Pasture is maintained to ensure high quality and high intake
  - Appropriate and adequate supplemental grain, TMR, and/or hay
- Low-stress environment
- Exercise
- Low disease exposure: Biosecurity, sanitation, and pasture management
- Effective vaccination protocols
- Alternative non-traditional treatments

### **What are some of the alternative mastitis treatments organic producers use?**

*Whey-based Products* (orally, intravenous, intramuscular, subcutaneous)

*Garlic Tincture* (orally, intravaginal or intrauterine)

*Aloe vera* (orally, intramuscular, intramammary, intravaginal or intrauterine)

*Vitamin C* (intramuscular, intramammary, intravenous)

*Aspirin* (orally)

*Homeopathy* (orally and intravaginal or intrauterine)

The principle behind homeopathy is “likes treat likes”, for example treating a bee sting with bee venom. Homeopathy also states that the more diluted the treatment, the more potent the effect will be. Within multiple trials, antibiotics, homeopathy, and a placebo treatment have been compared. Although, antibiotics were better than both the placebo and homeopathy treatments, antibiotics were only statistically better than the placebo treatment.

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***Multivitamins*** (orally)

***Vegetable oils*** (topical)

***Corticosteroids*** (intramuscular, intramammary)

***Electrolytes*** (orally)

***Microbial supplement*** (intramammary)

***Vitamin B*** (intramuscular)

***Essential oils*** (topical)

Alternative, non-traditional treatments such as those above have not been heavily studied or proven to affect the recovery or health of the cows. Organic treatments may also cause adverse effects that have not been documented, particularly due to the lack of research. Of surveyed organic producers, 92% of these producers want more research on organic treatments and 91% want training for veterinarians on organic treatments. It is likely the demand for organic products will continue to increase as 60% of Americans think antibiotic use in livestock leads to human infections that are harder to treat. While organic production is limited on the conventional treatments it can provide, there are many organic alternative methods used although results are unproven. As with any other production type, prevention is the key to healthy cows and comes with proper management of the herd.

*This material was discussed at the 2017 American Dairy Science Association annual meeting in Pittsburgh, PA. Additional details were retrieved from the Kentucky Department of Agriculture and USDA National Organic Program Handbook.*