

ORGANIC

DESCRIPTION

Organic farms are those certified under the USDA National Organic Program. The USDA National Organic Program is defined in the United States Federal code and is the only legally recognized standard for organic products in the United States (although programs from other countries may be granted USDA status). The National Organic Program requires that farmers meet certain criteria with regard to planning, producing, handling, labeling, and record keeping for plant and animal products. In general, these standards require a 'natural' approach to farming in which ecosystem processes drive growth as opposed to 'man-made' inputs such as synthetic fertilizers, pesticides, and other chemicals. Conversion of a herd from traditional to organic takes at least one year. Conversion of a field takes at least 3 years.

Because only an accredited organization can certify a farm as organic under the requirements of the USDA National Organic Program, this module provides a summary of the regulations rather than certification questions. To obtain an application form or further information on certification, contact the Northeast Organic Farming Association of Vermont (NOFA) (see www.nofavt.org).

INCENTIVES FOR CHANGE

- **Benefits to the farmer.** Currently, less than 2% of the U.S. food supply is grown using organic methods.¹¹⁶ However, the market is growing approximately 20% per year,¹¹⁷ and is expected to continue growing at a high rate into the future. Therefore, the organic milk market provides a unique opportunity for farmers to differentiate their products within the milk market and sell them at a premium. Current organic milk prices are over \$20 per hundred pounds compared to \$11 to \$14 for conventional milk.¹¹⁸ Moreover, there is little difference between traditional and organic yields. Research shows that organic harvests are dependent upon the type of feed given to cows, rather than upon the type of farming system used.¹¹⁹ Yields may also vary depending upon the amount of grazed forage compared to high-concentrate feed.¹²⁰

While the price paid to farmers per hundredweight is higher than conventional milk prices, inputs such as feed and seed are also more expensive, so this method may not necessarily be more profitable than non-organic production. Given this, and the fact that demand for organic milk may vary by season or location, it is recommended that farmers ensure adequate demand before undertaking conversion to organic. With current trends in fluctuating milk prices, however, this method does guarantee a higher price per hundredweight.

- **Environmental benefits.** To be certified, the USDA National Organic Program requires that farms take action to produce their goods in an environmentally sustainable way. This Program addresses the following issues: water quality, soil health, nutrient balances, erosion, biodiversity, and Animal Husbandry practices. Many of the requirements are specific to cropping practices, but also affect livestock production in that only organic feed may be fed to an organic herd.

SUMMARY OF USDA NATIONAL ORGANIC PROGRAM REGULATIONS

The following metrics are taken from the USDA National Organic Program regulations and are divided into three categories: management, livestock, and cropping. It is important to note that some of the criteria laid out under the regulations are absolute, leaving no room for interpretation by the certifying official (such as no use of hormones). Other criteria lack strict definitions for compliance (such as whether or not tillage practices minimize soil erosion), leaving the certifying official to evaluate performance in each category.



MANAGEMENT ¹²¹

Organic production and handling system plan. A farmer must provide a management plan that includes a description of the practices and procedures to be used in raising organic crops and livestock; a list of chemicals and other inputs to be used; a description of monitoring practices; and a description of a recordkeeping system.

- **Separate Organic and Non-Organic Handling Systems.** The farmer must implement measures necessary to prevent commingling of organic and non-organic products and protect products from prohibited substances. He or she must not package goods in containers that have a synthetic fungicide preservative or fumigant or use or reuse any container that could contaminate the integrity of an organic product.
- **Product Labeling.** Only products with a certain amount of organic content may be marketed as 'organic.' Products sold as '100% organic' must contain by weight or fluid volume 100% organically produced ingredients (excluding water and salt). Products sold as 'organic' must contain at least 95% organically produced products (excluding water and salt). Both 100% and 95% organic products may be labeled with the USDA organic seal. Products sold as 'made with organic ingredients or food group(s)' must contain at least 70% organically produced products (excluding water and salt). These products may not use the USDA seal. Products with less than 70% organically produced ingredients may identify each ingredient that is organic with the word 'organic' if the percentage of organic contents is shown on the information panel. These products may also not use the USDA seal.
- **Organic Handling Requirements.** Mechanical or biological methods may be used to process organic products for the purpose of retarding spoilage or preparing goods for market.
- **Pest Management in Buildings and Facilities.** The farmer must use practices to prevent pests, including, but not limited to: removal of pest habitat, food sources, and breeding areas; preventing pest from accessing facilities; and management of temperature, light, humidity, and other factors. Pests may be controlled through: mechanical or physical controls, lures and repellents allowed under the rule, or methods not allowed under the rule if the handler and certifying agent agree on the method and the handler updates the management plan accordingly.

LIVESTOCK ¹²²

- **Origin of livestock.** Organic milk or milk products must be from animals that have been under organic management for at least one year. If a grower wants to convert an entire herd, he or she must provide a minimum of 80% organic feed for 9 months, followed by three months of 100% organic feed. In addition, all other requirements must be met. All management must be continuous. Records must be maintained to identify organically managed animals.
- **Livestock feed.** Farmers must provide cows organic feed, including pasture and forage, and may provide non-synthetic or synthetic feed additives and supplements allowed under the rule. The farmer must not use animal drugs (including hormones) to promote growth or provide feed supplements and additives above amounts needed for nutrition and health maintenance. A farmer can not use plastic pellets for roughage; must not feed cows formulas containing urea, manure, or mammalian or poultry slaughter by-products; or use additives or supplements in violation of the Federal Food, Drug, and Cosmetic Act.



- **Use of Drugs, Vaccinations, Hormones.** Farmers may not administer any drugs other than vaccinations in the absence of illness, use growth hormones or recombinant bovine growth hormone, administer synthetic parasiticides on a routine basis, administer parasiticides to slaughter stock, administer drugs in violation of the Federal Food, Drug, and Cosmetic Act, or withhold medical treatment from a sick animal in an effort to preserve its organic status. All appropriate medications must be used to restore a sick animal to health. Cows treated with prohibited substances may not be represented as organic.
- **Livestock Health Care Practice Standard.** The farmer must provide and maintain health care practices. He or she must: select species and types of livestock with regard to suitability for site-specific conditions; provide a feed ration sufficient to meet nutritional requirements; establish appropriate housing, pasture conditions, and sanitation practices; provide conditions which allow for exercise, freedom of movement, and reduction of stress; perform physical alterations to minimize pain and stress; and administer vaccines and biologics if necessary.
- **Livestock Living Conditions.** The farmer will provide living conditions that accommodate the health and natural behavior of animals including access to outdoors, shade, shelter, exercise areas, fresh air, and direct sunlight, access to pasture for ruminants, and clean dry bedding. The farmer must provide shelter designed for natural maintenance, comfort behaviors, and the opportunity to exercise. Any shelter must also be designed for the appropriate temperature level, air circulation, and low potential for injury. The farmer may provide temporary confinement due to inclement weather, animals' stage of production, conditions where health and safety may be jeopardized, or to avoid risk to soil or water quality. The farmer must manage manure in a way that optimizes recycling of nutrients and does not contribute to contamination of crops, soil or water.

CROPPING¹²³

- **Land Requirements.** Any parcel of land must have been managed according to the soil fertility and crop nutrient practice standard (see below) and have had no prohibited substances applied to it for at least three years preceding harvest of any organic crops.
- **Soil Fertility and Crop Nutrient Management Practice Standards.** The farmer must implement tillage and cultivation practices that maintain or improve the physical, chemical, and biological condition of soil and minimize soil erosion; manage crop nutrients and soil fertility through crop rotations, cover crops, and the application of plant and animal materials; and manage plant and animal material to maintain or improve soil organic matter content. Specific direction is included for use of raw animal matter, composted plant and animal materials, and uncomposted plant materials. In addition, methods for managing crop nutrients through other means are provided.
- **Crop Pest, Weed, and Disease Management Practice Standards.** The farmer must use management practices to prevent crop pests, weeds, and diseases through crop rotation, sanitation measures, and cultural practices such as selecting plant varieties that are resistant to pests, weeds, and diseases. When natural methods cannot control pests, weeds, and diseases, an allowed synthetic substance may be used as long as it is documented in the organic plan.
- **Crop Rotation Practice Standards.** The farmer must implement a crop rotation including, but not limited to sod, cover crops, green manure crops, and catch crops to maintain or improve soil organic matter content, provide for pest management, manage nutrients, and provide erosion control.



LINKAGES TO OTHER MODULES

While this is the only module that focuses directly on organic production, it should be noted that organic practices can positively impact other sustainable agriculture indicators such as Animal Husbandry, Soil Health, Water Management, Nutrient Management, and Pest Management as described below.

ORGANIC TOPIC

Livestock Feed
Livestock Health Care Practice Standard
Livestock Living Conditions
Soil Fertility and Crop Nutrient Management Practice Standard
Soil Fertility and Crop Nutrient Management Practice Standard
Soil Fertility and Crop Nutrient Management Practice Standard
Crop Pest, Weed, and Disease Management Practices Standard
Crop Rotation Practice Standard

OTHER MODULE(S)

Nutrient Management
Animal Husbandry
Animal Husbandry
Soil Health
Water Management
Nutrient Management
Pest Management
Nutrient Management

FURTHER INFORMATION

Additional details and information on the above can be obtained through the following programs or sources.

- **Northeast Organic Farming Association of Vermont.** <http://www.nofavt.org/index.cfm>. This non-profit association of farmers, gardeners, and consumers works to organic farming in Vermont. It is also the only accredited certifying organization in Vermont.
- **Appropriate Technology Transfer for Rural Areas (ATTRA).** "Organic Farming Source List." <http://attra.ncat.org/organic.html#list>. ATTRA specializes in developing sustainable agricultural information and tools. This page provides a number of documents focused on organic farming including: organic fruits, vegetables, flowers, herbs, field crops and livestock. It also has documents focusing on organic practices for pests, soil and fertilizer health, and marketing.
- **Appropriate Technology Transfer for Rural Areas (ATTRA).** "An Organic and Sustainable Practices Workbook and Resource Guide for Livestock Systems, April 2002." <http://attra.ncat.org/attra-pub/PDF/livestockworkbook.pdf>. ATTRA specializes in developing sustainable agricultural information and tools. This workbook explains the range of practices and materials allowed under the USDA National Organic Program regulations. It is a great tool for helping farmers contemplating conversion to organic production.
- **USDA.** "The National Organic Program" homepage. <http://www.ams.usda.gov/nop/indexIE.htm>. This USDA site provides the full regulation text, questions and answers, a list of certifying agents, and other information on the National Organic Program.



Footnotes

- 116 Dimitri, Carolyn, and Greene, Catherine. Recent Growth Patterns in the U.S. Organic Foods Market. USDA Economic Research Service. Washington, DC, 2002. 30 Nov. 2003 <<http://www.ers.usda.gov/publications/aib777/>>
- 118 Ibid
- 119 Smallheer, Susan. "Organic milk called a cure for Vt. Dairies." The Barre Montpelier Times Angus on the Web. 6 July 2003. 7 Aug. 2003 <<http://www.timesargus.com/Story/66645.html>>.
- 120 Research-station of Öjebyn. Swedish University of Agricultural Sciences. 22 Nov. 2003 <<http://www.njv.slu.se/sections/animal/organic.cfm>>.
- 121 Cederberg, Christel and Berit, Mattsson. "Life cycle assessment of milk production – a comparison of conventional and organic farming." Journal of Cleaner Production, Vol. 8 (2000).
- 122 Adapted from USDA National Organic Program. "Regulatory Text Only." National Organic Program 7 CFR 205. 22 Nov. 2003 <www.ams.usda.gov/nop/NOP/standards/FullRegTextOnly.html>.
- 123 Ibid.
- 123 Ibid.

