

An Introduction to Organic Food and Farming

Principles, Standards and Impacts



Organic farming is based on a philosophy and system of production that supports healthy ecosystems by mirroring the natural cycles of living organisms. Organic agriculture (in contrast to traditional agricultural methods used before non-organic “conventional” options existed) began more or less simultaneously in Central Europe and India. The British botanist Sir Albert Howard, who studied organic farming methods during the first half of the 20th Century and published *An Agricultural Testament* in 1940, is often referred to as the father of modern organic agriculture, as he was the first to apply modern scientific knowledge and methods to traditional agriculture.

During the latter half of the 20th Century, a nascent organic trade formed in the U.S. around the farmers establishing and transitioning farms operating with organic principles and practices. By the last quarter of the century, this food and farming “movement” had grown enough that legal guidelines were considered necessary to support continued growth and ensure integrity. In 1989, Oregon’s organic law for the first time codified a materials list detailing the allowed inputs and practices, and in 1990 the Organic Foods Production Act was passed by the United States Congress.

The United States Department of Agriculture (USDA) National Organic Program (NOP) presents the regulations for the production, handling, labeling, and enforcement of all organic products sold in the United States. Built on principles that strive to maximize human and ecosystem health, organic certification requires farmers, handlers, and processors to adhere to NOP’s strict set of regulations. Among other parameters, organic operations are prohibited from using toxic synthetic pesticides, synthetic fertilizers, sewage sludge, irradiation, and genetic engineering, and must follow strict rules for livestock care and feeding. Organic farmers must also implement plans to improve soil health and support on-farm biodiversity.

The contrasts in farming practices used on organic versus conventional farms can lead to several differences in environmental impacts on farms. For example, organic soils tend to score higher when it comes to soil health metrics than do conventional soils. Similarly, organic soils sequester more carbon, and support larger populations of pollinators.

To comply with organic regulations, organic producers use techniques such as organic soil amendments, crop rotation, cover crops, and integrated pest management techniques to overcome on-farm challenges. While these tools are not constrained to use within organic systems, because they are the only tools available for organic management of nutrients, weeds, and pests, these practices are used much more frequently in organic systems than by conventional farmers. The contrasts in farming practices used on organic versus conventional farms can lead to several differences in environmental impacts on farms. For example, organic soils tend to score higher when it comes to soil health metrics than do conventional soils. Similarly, organic soils sequester more carbon, and support larger populations of pollinators. Organic food also tends to have lower levels of pesticide residues. A large body of research has shown that not only do organic crops and dairy have lower levels of synthetic chemicals, such as pesticides and antibiotics, but that eating an organic diet can also reduce pesticide loads within our bodies.

1. Organic diet intervention significantly reduces urinary pesticide levels in U.S. children and adults, Environmental Research. Volume 171, April 2019, pp 568-575.

A brief history of “Oregon Organic”

During the 1970s Oregon's organic community took significant steps toward establishing its reputation as a home of not only the organic agricultural movement, but as an organic marketplace. While Oregon Tilth continued to evolve its infrastructure and programs, entrepreneurs were establishing organic food production companies that served the independent natural foods stores and coops in the state. Also established were two organizations designed to provide support to the burgeoning organic trade. Provender Alliance, formed in 1977, answered the call for “an organizing, educational support agency for the natural foods and products trade.” In the upper Willamette Valley, as small-scale organic operations were being established around Oregon's urban areas, growers and activists incorporated Organically Grown Cooperative in 1978. Initially formed as a non-profit, they soon transformed OGC into a grower-owned, agricultural marketing cooperative that coordinated their production and sales.

Innovative leadership was also on display on the policy front. Oregon had established the first state law relating to organic foods, in 1974. In 1989, another state law was passed that updated requirements for organic production and included the first materials list in any organic regulation. The concept of a materials list that unambiguously detailed what could, and could not, be used in organic production would later be carried into the national law, which was passed with essential support from Oregon's U.S. Representative Peter DeFazio. Trade support organizations also flourished with Oregon engagement:

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Throughout the last decades of the 20th century and the first of the 21st, Oregon's organic trade continued to grow at a steady rate, as more farms and ranches became certified and more markets became available. Even as natural foods cooperatives continued to thrive, conventional chains – both Oregon and nationally based – incorporated organic foods into their offerings. Oregon State University pivoted resources toward class and degree offerings as well as greater extension support. The Oregon Organic Coalition held annual awards dinners as part of Organically Grown in Oregon Week, which has been supported with a formal declaration by Governor's decree since 1988. And, in the fields and orchards, Oregon's organic agriculturalists found success as their decades of experience and the increasing health of their bio-diverse whole-system farms resulted in more reliable production for outlets ranging from Farmers' Markets to a community of natural foods cooperatives to larger chain grocery retailers with Oregon roots, such as New Seasons and Market of Choice, Fred Meyer and WinCo.

