Buying Organic—What Does it Mean?

Fact and Myth

When asked the difference between organic goods and those labeled all-natural, eco-friendly, or naturally grown, consumers may respond that these are one and the same. In reality, they are different.

In 1990, the federal Organic Foods Production Act established the National Organic Program (NOP) to support specialty crop producers,* organic farmers, and the standards for producing, handling, and processing organically grown agricultural products.

The United States Department of Agriculture (USDA) defines organic as a labeling term for food and other agricultural products in much the same way as it defines labeling terms for the grading of beef, eggs, and dairy products. The organic label can only be used on products produced by NOP-approved methods, which are intended to promote and enhance biodiversity, biological cycles, and biological soil activity. They are based on the minimal use of off-farm inputs and on management practices that restore, maintain, and enhance natural cycling of the farm’s ecological resources. Use of the word organic is mandated by the NOP standards.

Thus, all-natural and organic are not the same. All-natural or eco-friendly products might have been produced using some of the organic standards and principles in the pre- or postharvest of their ingredients, but these labels do not guarantee that the product complies with the federal regulations defining organic. Although organic farming and all-natural gardens can both support a local ecology, only one is certified.

What Is Certified Organic?

Certified organic is a production term referring to the NOP-standardized practices that farmers and processors use to grow and process agriculture products such as fruits, vegetables, grains, livestock, dairy, and others. Organic farmers use alternative methods and inputs for fertilization, weed control, insect and disease management, and animal health in an attempt to protect environmental resources and reduce consumer exposure to chemicals. These strict standards are voluntarily accepted and federally regulated. Organic farms are also required by law to keep detailed records and undergo an in-depth, annual oversight and certification process to verify that all standards and requirements are being met. These added regulations and requirements are part of the cost of growing certified organic products.

What Is Certified Naturally Grown?

The certified naturally grown (CNG) program serves as an alternative to the USDA’s NOP standards. It costs less, requires less paperwork, and is based on a participatory guarantee system allowing farmer-inspectors to make suggestions and assist other producers. The CNG program has strict standards required for using its label. It is primarily designed for small farmers who sell via local networks such as roadside stands, farmers markets, local restaurants, and small grocery stores. CNG producers benefit from the program’s website, which promotes their businesses: www.naturallygrown.org/.

Organic Foods

* Organic foods are typically from farms growing specialty crops (fruits, vegetables, and other small-scale produced crops and livestock) for direct market to consumers and local markets. In Alabama and across the nation, both organic and other specialty crop farms sell to an ever-expanding market.

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Pest Management for Certified Organic

For disease, weed, and insect pest problems on the farm, management practices are chosen to reduce negative environmental impacts. The NOP standards emphasize a three-tiered, integrated approach, with particular emphasis on practices of level 1 and level 2. Farmers must also consult with their certifying agency to ensure that approved methods are used in the overall pest management plan.

The first line of defense, level 1, is using cultural practices, such as crop rotation, cover crops, resistant plant varieties, and trap crops. Level 2 consists of adding mechanical and physical control methods, such as mulching, row covers, mowing, and others. The last resort, or level 3, is to use pesticides.**

Although certified organic products are free of common synthetic pesticides and fertilizers, certified organic producers may use approved pesticides and apply fertility amendments to their crops. Some of the more popular organically approved fertilizers include manure-based products and items mined from the earth such as lime, potassium sulfate, and sodium nitrate. Some approved pesticides include Safer Brand EndAll Insect Killer (using pyrethrum from specific plants in the daisy, or Aster, family), DiPel (using *Bacillus thuringiensis*, a naturally occurring soil bacterium), and Conserve Fire Ant Bait (using a byproduct of the soil bacterium *Saccharopolysora spinosa*).

Pest. Any organism (bacteria, viruses, fungi, weeds, insect, or other animal) causing economic damage to a desired plant or landscape.

Pesticide. Any material or substance that causes harm to a pest. Examples of NOP-approved pesticides are oil spray, pyrethrum, and copper sulfate. Examples of pesticides not used in certified organic production are glyphosate, hydramethylnon, and carbaryl.

Fertilizer. A material or substance that contains one or more of the 16 essential nutrients for plant growth. Carbon, hydrogen, and oxygen are derived from air and water; nitrogen (N), calcium (Ca), boron (B), phosphorus (P), magnesium (Mg), chlorine (Cl), potassium (K), sulfur (S), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo), and zinc (Zn) are derived from natural and synthetic materials. Fertilizers can be plant based, as in compost tea; mineral based, as with dolomitic limestone; or synthetic, as in a crystalline, water-soluble brand such as Miracle-Gro Plant Food or an encapsulated slow-release brand such as Pennington Lawn Food.

The Levels of Organic Foods

USDA NOP standards identify three official designations. Producers must follow these strict guidelines. Only producers who annually sell less than $5,000 worth of products are exempt from these labeling rules.

- **100 percent organic** Whether a raw product, such as fruits, vegetables, and meat, or processed, such as breakfast cereal, all ingredients must be certified organic. Product labels must state the name of the certifying agent.

- **Organic** These products contain at least 95 percent certified organic ingredients by weight. Noncertified ingredients must be from an approved list. The label states the certifying agent.

- **Made with organic** These products contain at least 70 percent certified organic ingredients by weight and the noncertified ingredients must be from the approved list. The certifying agent is stated on the label, but the USDA organic seal cannot be used.

**OMRI**

** The Organic Materials Review Institute (OMRI) is an organization that tests and catalogs soil improvement and pesticide products for approved use in certified organic production. Organic-approved chemicals range from mild chemistries, such as soap sprays, to target-specific biopesticides, such as Bt, to more harsh chemistries, such as copper sulfate, spinosad, and pyrethrum that require EPA registration. As with any pesticide, always read and follow the label directions for safe use and environmental protection. Spinosad and pyrethrum are examples of highly toxic OMRI-approved pesticides. These are safe when applied correctly but can be lethal to pollinators and other organisms when misapplied.
What Does This Mean for Home Gardeners?

Because of the cost of becoming certified organic, few home gardeners will take the steps necessary to be truly organic. As a home gardener, you can take steps to be more environmentally friendly. Besides, there is no fresher, tastier, prettier veggie than the one you have grown yourself.

Organic-like home gardening is all about emphasizing the use of renewable resources and conserving soil and water to preserve environmental quality. Proper pest identification to reduce pesticide use, soil testing for responsible fertilization, and dutiful attention to building soil organic matter are all part of a garden's ability to support natural biological cycles. All of these can easily be done in a home garden without all the record keeping and costly certifications required for certified organic farmers.

Simple ways to enhance garden management:

- Protect and increase soil organic matter by using compost (make your own!), mulch, and cover crops and by choosing organic fertilizers, such as fish emulsion, kelp, and manures***.
- Use an adequate mulch layer, even in a vegetable garden, to help conserve water, prevent soil erosion, and build a food source for beneficial soil microbes.
- Use drip irrigation or soaker hoses to reduce water waste due to evaporation, and use these irrigation systems only when the weather calls for it. Learn how your plants use water by digging in the soil to determine how quickly it dries or stays moist because consistent soil moisture reduces plant stress.
- Choose plants and vegetable varieties suited for your climate. This reduces water use, susceptibility to pests, and overall plant stress.
- Use caution when applying any pesticide as some can also kill beneficial insects, such as honey bees and predatory insects. Think first of other control methods, such as row covers and trap crops that confuse pests, or the pick-and-stomp method (levels 1 and 2 above). Most important, realize that produce does not have to look like a grocery store display—a little aesthetic damage does not mean the vegetable tastes less yummy than the unblemished one.
- Learn to recognize beneficial insects (lady beetle larvae, big-eyed bug, braconid wasps, etc.) that help reduce pests in your garden and landscape.
- Finally, when you cannot grow it yourself, buy locally grown and locally made products. Knowing your farmer is one way to learn how the food on your table was produced.

Know the N to P Ratio

*** Most plants use a 5:1 ratio of nitrogen (N) to phosphorus (P). If the organic fertilizer contains a 1:1 ratio of N to P (as do manures), it will be necessary to apply excessive amounts of P so that the plant's N needs can be met. This leads to excessive amounts of unused P in the soil. Soil test annually, or every second year, to ensure that P levels do not exceed the recommended amounts, and read the product label to learn nutrient percentages of the fertilizer you intend to apply.
Seek Answers from Extension

The Alabama Cooperative Extension System is committed to serving all food producers and consumers. Regional Extension agents regularly organize special training meetings to teach producers and consumers the methods that correctly utilize science-based organic practices on the farm and in the home garden. We also encourage you to check the Alabama Sustainable Agriculture Research and Education (SARE) website to learn more about the progress of organic farming in Alabama, and contact the state SARE coordinators for any questions or concerns.

Resources

USDA National Organic Program standards
http://www.ams.usda.gov/AMSv1.0/nop

Certified Naturally Grown program
http://www.naturallygrown.org/

OMRI-approved products
http://www.omri.org/omri-lists

Alabama SARE
http://www.southernsare.org/SARE-in-Your-State/Alabama

Alabama Vegetable IPM
http://www.aces.edu/go/87

ACES Timely Information
“Some Notes on Organic Farming” 2006: www.aces.edu/go/310

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