

FOOD LABELS AND QUALITY INGREDIENTS

Words like *free-range*, *grass-fed*, *local*, *natural*, and *organic* seem to be everywhere these days. Food labels can be confusing, so knowing what the claims truly mean is a good way to educate yourself about where your food comes from and how it's been produced.

There's also some controversy around the quality of different types of food – specifically organic. Some experts think organic food is pricey and unnecessary, while some think it's safer and more nutritious than conventional food. There is research to support both sides.^{1,2}



While the research isn't conclusive, here are some non-nutritional reasons to consider organic and/or local produce:

- Organic produce may be significantly higher in antioxidants, particularly in terms of polyphenols, when compared to conventional produce.²
- Conventionally cultivated produce may have up to four times more pesticide residue than organic produce.³
- Organic foods and practices help nourish the soil and keep it viable for future harvests.
- Conventional methods tend to be more taxing on the environment.
- Even if not labeled organic, locally produced foods have less of an impact on the environment, since they aren't being shipped from far away.

Read on to learn how to be a smart shopper and more about the different label claims!

SMART SHOPPING

If you purchase most of your produce from supermarkets, price lookup (PLU) codes can help determine whether a food is organic or conventional. Foods that are produced organically typically have five-digit PLU codes that begin with the number 9. Conventional produce usually has a four-digit code that begins with a 3 or 4. Keep in mind, however, that this system is optional, so not all produce will have this signifying label.⁴



Organic: five-digit code starting with 9



Conventional: four-digit code starting with 3 or 4

FOOD LABEL GLOSSARY

Antibiotic-free	Antibiotic-free means that an animal was not given antibiotics during its lifetime. In the United States, this label is not allowed on meat or poultry products but can be used on dairy products. Other phrases to indicate the same approach include "no antibiotics administered" and "raised without antibiotics," both of which may be used on meat products. ^{5,6}
Bioengineered	Bioengineered is a label that, as of January 2020, is required by the U.S. government on foods that "contain detectable genetic material that has been modified through certain lab techniques." This label must be used on any foods that contain one of the 13 bioengineered foods available throughout the world: alfalfa, apples, canola, corn, cotton, eggplant, papaya, pineapple, potatoes, salmon, soybeans, squash, and sugar beets. However, no disclosure is required if the amount of genetically modified material cannot be measured.
Cage-free	Cage-free means that the birds are raised without cages. What this doesn't explain is whether the birds were raised outdoors at pasture or if they were raised indoors in overcrowded conditions. If you are looking to buy eggs, poultry, or meat from animals raised outdoors, look for a label that says "pastured" or "pasture-raised."
Certified naturally grown	Certified naturally grown is an alternative to organic for farmers who may find it expensive or time-consuming to get or maintain the USDA label. This label means that food was grown using responsible soil management techniques, without the use of synthetic pesticides on plants or hormones and antibiotics on animals, and without genetically engineered seeds. While this label shares many of the same standards as the USDA organic label, there isn't a yearly review of the records; in some cases, there may be more stringent requirements for this label.

Conventional	Also known as "industrial agriculture," conventional describes a system of growing that uses technology and synthetic chemicals to help increase yields. Conventional farming may include growing the same crop on the same plot each year (monocropping), genetically modified organisms (GMOs), confined animal feeding operations (CAFOs), and synthetic chemicals that target insects and weeds.
Fair trade	A fair trade label means that farmers and workers, often in developing countries, have received fair wages and worked in acceptable conditions while growing and packaging the product.
Free-range	The use of the terms <i>free-range</i> or <i>free-roaming</i> is only defined by the USDA for egg and poultry production. The label can be used as long as the producers allow the birds access to the outdoors so they can engage in natural behaviors. It does not necessarily mean that the products are cruelty-free or antibiotic-free or that the animals spent the majority of their time outdoors. Claims are defined by the USDA but are not verified by third-party inspectors.
GMO-free, non-GMO, or no GMOs	GMOs are plants or animals that have been genetically engineered with DNA from bacteria, viruses, or other plants and animals. Products can be labeled <i>GMO-free</i> if they are produced without being genetically engineered through the use of GMOs.
Grain-fed	Animals raised on a grain diet are labeled <i>grain-fed</i> . Check the label for a claim of a "100% vegetarian diet" to ensure that the animals were given feed containing no animal by-products.

Grass-fed	This means the animals were fed grass, their natural diet, rather than grains. In addition to being more humane, grass-fed meat is leaner and lower in fat and calories than grain-fed meat. Grass-fed animals are not fed grain, animal by-products, synthetic hormones, or antibiotics to promote growth or prevent disease; they may, however, have been given antibiotics to treat disease. A grass-fed label doesn't mean the animal necessarily ate grass its entire life. Some grass-fed cattle are grain-finished, which means they ate grain from a feedlot prior to slaughter. Look for grass-fed and grass-finished.
Healthy	Foods labeled <i>healthy</i> must be low in saturated fat and contain limited amounts of cholesterol and sodium. Certain foods must also contain at least 10% of the following nutrients: vitamins A and C, iron, calcium, protein, and fiber.
Heritage	A heritage label describes a rare and endangered breed of livestock or crops. Heritage breeds are traditional livestock that were raised by farmers in the past, before industrial agriculture drastically reduced breed variety. These animals are prized for their rich taste and usually contain a higher fat content than commercial breeds. Production standards are not required by law, but true heritage farmers use sustainable production methods. This method of production saves animals from extinction and preserves genetic diversity.
Hormone-free	The USDA has prohibited the use of the term <i>hormone-free</i> for certain animals, but those raised without added growth hormones, such as cows, can be labeled <i>no hormones administered</i> or <i>no added hormones</i> . By law, hogs and poultry cannot be given any hormones. If the meats you are buying are not clearly labeled, ask your farmer or butcher if they are free from hormones.

Local	In general, <i>local</i> refers to food that is grown within 100 miles of where it's being purchased – though some may prefer food grown closer; others have an even more strict definition, believing only that food directly from a farm or farmers' market is local. Local food can be conventional or organic and may or may not contain GMOs. Local food is fresher, often tastes better, and provides clarity for where the food is sourced.
Natural	No standards currently exist for this label except when used on meat and poultry products. USDA guidelines state that meat and poultry products labeled <i>natural</i> can only undergo minimal processing and cannot contain artificial colors, artificial flavors, preservatives, or other artificial ingredients. However, natural foods are not necessarily sustainable, organic, humanely raised, or free of hormones and antibiotics.
Nonirradiated	This label means that the food has not been exposed to radiation. Meat and vegetables are sometimes irradiated (exposed to radiation energy) to kill disease-causing bacteria and reduce the incidence of foodborne illness. No thorough testing has been done to know if irradiated food is safe for human consumption.
Pasture-raised	Pasture-raised indicates that the animal was raised on a pasture where it was able to eat grasses and other plants rather than being fattened on grain in a feedlot or barn. Pasturing livestock and poultry is a traditional farming technique that allows animals to be raised in a humane manner. Animals can move around freely and carry out their natural behaviors. This term is very similar to grass-fed, but pasture-raised more clearly indicates that the animal was raised outdoors at pasture.
rBGH-free or rBST-free	Recombinant bovine growth hormone (rBGH) or recombinant bovine somatotropin (rBST) are genetically engineered growth hormones injected into dairy cows to artificially increase their milk production. The hormone has not been properly tested for safety and is not permitted in the European Union, Canada, and other countries. Milk labeled <i>rBGH-free</i> is produced by dairy cows that have never received injections of this hormone. Organic milk is rBGH-free.

All organic agricultural farms and products must meet the following guidelines (verified by a USDA-approved independent agency):

- Abstain from the application of prohibited materials (including synthetic fertilizers, pesticides, and sewage sludge) for three years prior to certification and then continually throughout their organic license.
- Prohibit the use of GMOs and irradiation.
- Employ positive soil building, conservation, manure management, and crop rotation practices.
- Provide outdoor access and pasture for livestock.
- Refrain from antibiotic and hormone use in animals.
- Sustain animals on 100% organic feed.
- Avoid contamination during processing of organic products.
- Keep records of all operations.

If a product contains the USDA organic seal, it means that 95%–100% of its ingredients are organic. Products with 70%–95% organic ingredients can still advertise "organic ingredients" on the front of the package, and products with less than 70% organic ingredients can identify them on the side panel. Organic foods prohibit the use of hydrogenation and trans fats.

Organic

FOOTNOTES

1 Dangour, A. D., Dodhia, S. K., Hayter, A., Allen, E., Lock, K., & Uauy, R. (2009). Nutritional quality of organic foods: A systematic review. *Am J Clin Nutr* 90(3), 680–685.

Retrieved from www.ncbi.nlm.nih.gov/pubmed/19640946

2 Baranski, M., Srednicka-Tober, D., Volakakis, N., Seal, C., Sanderson, R., Stewart, G. B., Benbrook, C., ... & Leifert, C. (2014). Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: A systematic literature review and meta-analyses. *Br J Nutr* 112(5), 794–811.

Retrieved from www.ncbi.nlm.nih.gov/pmc/articles/PMC4141693

The Environmental Working Group. (2021). EWG's 2021 shopper's guide to pesticides in produce.

Retrieved from www.ewg.org/foodnews/summary.php

4 International Federation for Produce Standards (IFPS). (n.d.). Price lookup codes.

Retrieved from www.ifpsglobal.com/Identification/PLU-Codes

5 Greener Choices. (2019). "Antibiotic free."

Retrieved from www.greenerchoices.org/2017/11/16/antibiotic-free-mean

6 Calvo, T. & Meltzer-Warren, R. (2018). What "no antibiotics" claims really mean.

Retrieved from www.consumerreports.org/overuse-of-antibiotics/what-no-antibiotic-claims-really-mean

- 7 United States Department of Agriculture (USDA). (n.d.). BE disclosure. Retrieved from www.ams.usda.gov/rules-regulations/be
- 8 United States Department of Agriculture (USDA). (n.d.). List of bioengineered foods.

Retrieved from www.ams.usda.gov/rules-regulations/be/bioengineered-foods-list

REFERENCE

Adapted from These Labels Are So Confusing!

GRACE Communications Foundation. (2017). These labels are so confusing! Sustainable Table [Food Program].

Retrieved from www.sustainabletable.org/944/these-labels-are-so-confusing