FACT SHEET: COMMON FOOD PRODUCTION PRACTICES AND THEIR UNIQUE CONTRIBUTIONS TO THE FOOD SUPPLY

INTERNATIONAL FOOD INFORMATION COUNCIL FOUNDATION

Increased interest in where our food comes from has led to more frequent use of common food production terms. Often, confusion reigns over the true meaning of these terms, which can lead to misinformed conclusions about the benefits of one type of food production versus another. Most food production terms have unique meanings, often defined by government regulations, and cannot be used interchangeably. In addition, certain food production methods are often presumed to produce more healthful or nutritious products, when in fact, the production method largely does not determine these traits of food.

This Fact Sheet provides definitions and explains key attributes of common food production methods, addresses common myths and questions pertaining to their safety and nutrition, and describes the legally permitted use(s) of food production terms, seals and/or logos on food packaging.

MODERN FOOD PRODUCTION SYSTEMS

What is modern food production?

Modern farming practices employ methods that maximize the amount of production per unit (either per acre or per animal) while conserving soil and water resources to meet the food demands of the US and global populations both today and long into the future. Unlike organic food production, there is no regulation that defines modern food production practices. Today, most foods in the United States are produced using modern farming practices. Conventional foods are produced using government-approved aids, like fertilizers (to promote plant growth), insecticides (to prevent crop loss from insects), herbicides (to reduce weed growth), and antibiotics and animal growth promotants (to prevent and treat disease and enhance animal growth). These products undergo extensive safety testing before approval for use.

Labeling foods produced using modern food production practices

Manufacturers are not generally required to provide information on the label detailing the type of production method or aids used to produce food. The U.S. Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), and the U.S. Environmental Protection Agency (EPA) work together to ensure that such aids used during food production will not have adverse health effects.

There are large margins of safety built into the FDA and EPA approval processes. Processing helps reduce the vast majority of trace pesticide residues that may remain on food. In addition, studies have shown that rinsing raw produce under running water helps to remove any unseen residues remaining on food.

Resources on Modern Food Production Systems:

IFT Scientific Review: "Feeding the World Today and Tomorrow: The Importance of Food Science and Technology": http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2010.00127.x/pdf

FDA: Pesticide Questions and Answers: http://www.fda.gov/Food/FoodSafety/FoodContaminantsAdulteration/Pesticides/ucm114992.htm

IFIC *Questions and Answers About Animal Antibiotics, Antimicrobial Resistance and Impact on Food Safety:* http://www.foodinsight.org/Resources/Detail.aspx?topic=Questions_and_Answers_Animal_Antibiotics_Antimicrobial_Resistance_and_Impact_on_Food_Safety_1

BIOTECHNOLOGY

What is food biotechnology?

Food biotechnology involves a range of processes used to enhance foods through various breeding and other techniques. Food biotechnology is the science of employing the tools of modern genetics to enhance beneficial traits of plants, animals, and microorganisms. This enhances the traditional method of crossbreeding, or combining different varieties of plants or animal species to bring out specific traits. This breeding process,

which also occurs in nature, has been used by farmers in crop production for centuries. In the last 20-30 years, this method has been enhanced through biotechnology to allow for faster, more accurate results. More recently, producers have utilized *recombinant DNA*, in which the DNA from one plant, animal, or microorganism is transferred to another in order to introduce new, desirable traits.

Labeling foods produced through biotechnology

The FDA does not require foods produced through biotechnology to be labeled unless biotechnology changes the nutritional value, composition, or safety of the food. The FDA, USDA, and EPA have determined that foods currently produced using biotechnology are safe and are identical in nutrition and composition to foods produced through other methods. In addition, biotech products are strongly regulated by these government agencies to further ensure the safety of the US food supply.

Resources on Biotech Food Production:

USDA Animal Plant Health Inspection Service: Biotechnology (APHIS): http://www.aphis.usda.gov/biotechnology/

Food and Agriculture Organization (FAO) of the United Nations Statement on Biotechnology: http://www.fao.org/biotech/stat.asp

IFIC Continuing Education Module: *Food Biotechnology 101: A Primer on the Science & the Public Debate:* http://www.foodinsight.org/Resources/Detail.aspx?topic=Food_Biotechnology_101_A_Primer_on_the_Science_the_Public_Debate_CPE_Program

IFT Scientific Review: "Feeding the World Today and Tomorrow: The Importance of Food Science and Technology": http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2010.00127.x/pdf

FDA: Plant Biotechnology For Food and Feed: http://www.fda.gov/Food/Biotechnology/default.htm

ORGANIC

What is organic food production?

The term organic is defined and regulated by the National Organic Program (NOP), of the U.S. Department of Agriculture (USDA). By regulation, organic food is produced without the use of synthetic pesticides (although organic does permit the use of "natural" pesticides); fertilizers made with synthetic ingredients or sewage sludge; antibiotics; growth hormones; bioengineering; or ionizing radiation. Organic farmers also use renewable resources and employ conservative soil and water techniques in food production. Many of today's farmers who engage in modern food production practices also use these techniques. For a food to be classified as organic, it must first obtain USDA organic certification from a government-approved certifier (Search approved certifiers both domestically and internationally at: Agricultural Marketing Service - USDA Accredited Certifying Agents), which certifies that the farm meets all USDA organic regulations.

Is food produced in compliance with USDA organic standards more healthful?

When you're shopping for food, remember that the "organic" label is not an indicator of a food being "healthier" or more nutritious – it is simply one type of food production method. The current body of research shows no significant difference in the nutritional content or safety of organic and conventionally produced foods.

Labeling organic food products

Producers of USDA Certified Organic foods may choose to use the USDA organic seal. A product that is not Certified USDA Organic may not use the term "organic" in any way to describe the product. Organic food labels must comply with both USDA's regulations for organic claims and FDA's labeling regulations. Organic food can be labeled in one of four ways:

1. 100% organic: All ingredients in the product are organic. The USDA Organic logo may be used on the packaging.
2. Organic: A minimum of 95% of the ingredients in the product are organic. The USDA Organic logo may be used on the packaging.
3. Made with organic ingredients: 70 - 94% of the product is organic. The USDA logo may not be used on the product packaging.
4. Organic ingredients listed on panel only: The food contains less than 70% organic ingredients. "Organic" may only be used in the ingredients list to describe the specific certified organic ingredients.

Resources on Organic Food Production:

USDA: Organic Production/Organic Food: Information Access Tools: http://www.nal.usda.gov/afsic/pubs/ofp/ofp.shtml

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

American Dietetic Association Hot Topics: Advising Consumers About Organic Foods and Healthful Eating: http://www.eatright.org/About/Content.aspx?id=10606

University of California Cooperative Extension: "Organic Agriculture: A Glossary of Terms for Farmers and Gardeners": http://ucce.ucdavis.edu/files/filelibrary/1068/8286.pdf

LOCAL

What is "local" food production?

There is currently no agreed-upon definition of "local." The term "local" is used in food production to describe the proximity of the origin of a food to where it is purchased. "Local" foods are most often produced, processed, distributed, and consumed within a smaller, defined area. Purchasing local foods can help stimulate the local economy and serve as a direct connection for consumers to their food and their local farmers, who can educate them about how food is produced. It is important to remember that a food described as "local" is not necessarily organic.

Labeling "local" foods

There is no official definition of a "local" food; therefore, there are no official guidelines for using the term on food packages, and supermarkets and farmers markets may advertise a product as being local based on their own assessment of where it was grown, processed, packaged, or other factors. Some markets label food produced within 10 miles as local, while for others the distance may be 50, 100, or more miles. Therefore, if this characteristic is important to you, you should ask your retailer what distance is used to designate a food as "local."

Resources on Local Food Production:

USDA ERS Report Summary: "Local Food Systems: Concepts, Impacts, and Issues" http://www.ers.usda.gov/Publications/ERR97/ERR97_ReportSummary.pdf

Choices Magazine First Quarter 2010 Paper on Local Foods: http://www.choicesmagazine.org/magazine/block.php?block=44

NATURAL

What is a "natural" food?

Society has adopted the term "natural" to describe a food in its unaltered state. However, there is no single official definition of natural as it relates to food. This means the term may have various meanings among different government and private agencies. Although FDA does not currently have a definition for natural, it allows food manufacturers to use the term to describe foods that do not contain added color, artificial flavors, or synthetic substances. When it comes to meat and poultry, the USDA Food Safety and Inspection Services (FSIS) defines "natural" as "a product containing no artificial ingredient or added color and is only minimally processed." (See definition of minimally processed below)

Labeling "natural" foods

The FDA does not define "natural" and therefore does not restrict manufacturers from using the term on packaging, if the product contains no added colors, synthetic substances, or synthetic flavors. USDA, which does define natural as it relates to meat and poultry, has strict rules for labeling products "natural." First, a product must be free of any "artificial flavoring, coloring, ingredient, or chemical preservative." Next, meat and poultry labeled as natural must be "minimally processed." Lastly, any food manufacturer using the term "natural" on its label must state the meaning of this term on the product package.

Resources on "Natural" Foods:

USDA Food Safety and Inspection Service (FSIS) Meat and Poultry Labeling Terms: http://www.fsis.usda.gov/factsheets/Meat_&_Poultry_Labeling_Terms/index.asp

FDA: "What is the meaning of 'natural' on the label of food?" http://www.fda.gov/AboutFDA/Transparency/Basics/ucm214868.htm

PROCESSED

What is a "processed" food?

Consumers commonly associate "processed" foods with being less nutritious and/or containing artificial ingredients or other added substances. The term processed is commonly used to describe certain foods with low nutritional value, including snacks, desserts, and carbonated beverages. However, processed foods represent a much broader range of foods that includes fresh, "natural," organic, and other healthful and nutrient-rich foods.

The 2010 Dietary Guidelines Advisory Committee Report defines a processed food as an agricultural commodity that has undergone, "washing, cleaning, milling, cutting, chopping, heating, pasteurizing, blanching, cooking, canning, freezing, drying, dehydrating, mixing, packaging, or other procedures that alter the food from its natural state." From the moment a food is harvested on the farm, it begins a journey to the

consumer's table, which can include many of these processes. Additionally, processing may include adding ingredients to foods such as "preservatives, flavors, nutrients, and other food additives or substances." The 2010 Dietary Guidelines Advisory Committee Report defines "minimally-processed" foods as "processed but retains most of its inherent physical, chemical, sensory and nutritional properties."

Food processing began with the discovery of simple ways to cook and refrigerate food to make the food edible and keep it from spoiling, and has evolved to include processes such as canning and freezing, as well as pasteurization (to kill harmful bacteria) and fortification (to improve the food's nutritional profile). Through innovations in food science and technology, it is now possible to have foods that stay fresher longer, and to offer more healthful foods by decreasing calories, fat, sodium and/or sugar levels.

Labeling "processed" foods

While you won't see many foods labeled "processed," packaged and boxed foods must provide the nutrition information for the product in the Nutrition Facts Panel (NFP), as well as disclose the ingredients used in the ingredients section on the package.

Resources on Processed Foods:

IFT Scientific Review: "Feeding the World Today and Tomorrow: The Importance of Food Science and Technology": http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2010.00127.x/pdf

IFIC Foundation *Understanding Our Food Communications Tool Kit*: www.foodinsight.org/understandingourfood.aspx

IFIC Foundation, *Environment and Consumer Perspectives Surrounding Processed Foods:* http://www.foodinsight.org/For-Professionals/Understanding-Our-Food/Additional-Resources/tabid/1399/Default.aspx

For more information, visit the following resources on the International Food Information Council Foundation Website:

IFIC Survey: *Consumer Insights Regarding Food Biotechnology:* http://www.foodinsight.org/Resources/Detail.aspx?topic=Consumer_Insights_Regarding_Food_Biotechnology

IFIC Foundation *Understanding Our Food Communications Tool Kit*: www.foodinsight.org/understandingourfood.aspx

Understanding Our Food Communications Tool Kit - Additional Resources: http://www.foodinsight.org/For-Professionals/Understanding-Our-Food/Additional-Resources/tabid/1399/Default.aspx

IFT Scientific Review: "Feeding the World Today and Tomorrow: The Importance of Food Science and Technology": http://onlinelibrary.wiley.com/doi/10.1111/j.1541-4337.2010.00127.x/pdf

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