

SUSTAINABLE AGRICULTURE¹

Sustainable Table[©]

Introduction

Every day, more and more consumers are shopping smarter, eating healthier, and enjoying an abundance of fresh, locally-grown products. Sustainable Table was created to celebrate this fast-growing, dynamic movement, to educate consumers on food-related issues, and to help build community through food. Today's dominant form of agriculture relies on synthetic fertilizers and chemical pesticides, large amounts of water, major transportation systems and factory-style practices for raising livestock and crops. Artificial hormones in milk, antibiotic-resistant bacteria, mad cow disease, and large-scale outbreaks of potentially deadly e.coli are all associated with this industrial form of food production.

Sustainable agriculture involves food production methods that are healthy, do not harm the environment, respect workers, are humane to animals, provide fair wages to farmers, and support farming communities. But rather than focus on the problems, Sustainable Table promotes the positive shift toward local, small-scale sustainable farming.

What is Sustainable Agriculture?

Sustainable agriculture is a way of raising food that is healthy for consumers and animals, does not harm the environment, is humane for workers, respects animals, provides a fair wage to the farmer, and supports and enhances rural communities. Characteristics of this type of agriculture include:

- (1) **Conservation and preservation.** What is taken out of the environment is put back in, so land and resources such as water, soil and air can be replenished and are available to future generations. The waste from sustainable farming stays within the farm's ecosystem and cannot cause buildup or pollution. In addition, sustainable agriculture seeks to minimize transportation costs and fossil fuel use, and is as locally-based as possible.
- (2) **Biodiversity.** Farms raise different types of plants and animals, which are rotated around the fields to enrich the soil and help prevent disease and pest outbreaks. Chemical pesticides are used minimally and only when necessary; many sustainable farms do not use any form of chemicals.
- (3) **Animal welfare.** Animals are treated humanely and with respect, and are well cared for. They are permitted to carry out their natural behaviors, such as grazing, rooting or pecking, and are fed a natural diet appropriate for their species.
- (4) **Economically viable.** Farmers are paid a fair wage and are not dependent on subsidies from the government. Sustainable farmers help strengthen rural communities.

¹ www.sustainabletable.org/

- (5) **Socially just.** Workers are treated fairly and paid competitive wages and benefits. They work in a safe environment and are offered proper living conditions and food.

In 1990, the US government defined sustainable agriculture in Public Law 101-624, Title XVI, Subtitle A, Section 1683, as “an integrated system of plant and animal production practices having a site-specific application that will, over the long term, satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole.”

The confusion with sustainable agriculture is that the definition is more a philosophy or way of life than a strict set of rules, and farmers can interpret the meaning differently. In addition, there is no legal obligation to follow any of the criteria for sustainability, so food can be labeled sustainable when in actuality it isn't. Many terms that describe this type of food, such as natural or cage free, do not have a legal or clear definition (though the USDA is currently working on this). For example, cage-free chickens might not be raised in cages, but they could be raised in overcrowded conditions in indoor barns, which is still inhumane.

That said, we must stress that the vast majority of sustainable farms are run by family farmers who are hardworking, honest and sincere people. They work all hours of the day and night to bring you the freshest, tastiest, best quality food available. Read on to find out how you can reconnect with your food and eat more sustainably. If at any point you become confused, please remember that changing to sustainable eating is a process and will take a little time. Sustainable Table has been created to help make this transition as easy as possible and to guide you through any confusion.

Sustainable agriculture is more a way of life than a law or regulation. Each step you take benefits both you and your family, and helps preserve and protect the planet for future generations. Sustainable Table has been developed to give you many reasons to eat sustainably, but, ultimately, only you can answer that question.

Why Buy Sustainable?

- (1) **Health.** More and more health benefits are being found with sustainable meat. According to New York Times bestselling author Jo Robinson, grass-fed beef has two to six times more omega-3's than factory farmed, grain-fed meat. Omega-3 is a "good" fat that helps our cardiovascular system, our brain function and may help prevent cancer. The concept of sustainability also involves eating local, which means buying food from a farm as close to you as possible. This cuts down on the length of time between when the food is harvested or processed and when you eat it. After being harvested, food begins to lose nutrients, so the less time between the farm and your dinner plate, the more nutritious the food is for you.
- (2) **Tastes Better.** Most people claim that sustainably-raised food simply tastes better. For example, today's industrial-raised turkeys are injected with saline solution and vegetable oils to try to improve "mouth feel". Years ago, a cook only had to put a turkey in the oven; today, the bird must be marinated, deep fried or brined to try to counteract the lack of flavor and dryness inherent in the meat.

- (3) **Animals.** Sustainably-raised animals are treated humanely and are permitted to carry out natural behaviors such as rooting in the dirt and pecking the ground. Factory-farmed animals are crammed together in unsanitary conditions, where they suffer horribly and are often sick. Most never see sunlight and their feet never touch the ground. These unhealthy animals are then processed and their meat sold to you.
- (4) **Environment.** On unsustainable factory farms, thousands of animals excrete tons of waste every week. Millions of gallons of this untreated waste are often held in open-air lagoons and pollute the surrounding air, land and water. According to the Environmental Protection Agency, hog, chicken and cattle waste polluted 35,000 miles of rivers in 22 states and contaminated groundwater in 17 states during the 1990's.
- (5) **Workers.** Workers on factory farms operate in very dangerous conditions. Some have been overcome by gases from manure lagoons and have died. They are often paid minimum wage and have no rights or say in their job. Employees on sustainable farms are paid a fair wage and are treated with respect.
- (6) **Rural Communities.** Sustainable farms are an integral part of the community, where money made on the farm is filtered back into local businesses. Studies have shown that factory farms can tear apart rural communities.
- (7) **Fossil Fuels and Energy Use.** Raising animals on factory farms takes a large amount of oil – to grow and harvest the crops that feed the animals, to fueling the ventilation systems and electricity in the barns in which they're held, to the transportation costs to move the animals the long distances they travel. This increases our dependence on foreign oil and foreign countries. Oil is also a non-renewable resource – meaning it cannot replenish itself. Some researchers have estimated that the planet will be out of oil within 50 years.
- (8) **Saving Family Farms.** Since 1950, over 2 million farms that raised hogs have disappeared. If this continues, we might lose all our farms, except for a few industrial facilities that will dictate what we eat. By eating sustainably, you're supporting a true American tradition that's part of our cultural heritage – the small, independent family farmer.

These are just a few reasons to eat sustainable food, and you'll find many more throughout this site, especially in our Issues section. Every dollar you spend sends a message to business -- the more you spend on sustainable food, the more sustainable food will be produced. What happens with our food is up to you – the choice is yours.

Three Easy Steps to Sustainability

If you want to know more about sustainable food but aren't sure where to begin start with our three Easy Steps. Simply educate yourself on the issues so you can ask the right questions in order to take action to eat healthier. In other words - Educate, Ask, Act.

Educate – What is Sustainability?

When a process is sustainable, it can be maintained indefinitely. Sustainable food production can be maintained indefinitely because sustainable farmers do not take more resources to produce food than they give back. A reliance on renewable resources - as well as on symbiotic relationships with nature and the surrounding community - means that these farms do not

damage the environment, are humane for workers and animals, provide a fair wage to the farmer, and support and enhance rural life. Because sustainable farmers see nature as an ally rather than an obstacle, they are able to produce more wholesome food while using less fossil fuels (thus lessening the impact on global warming), and without using any synthetic pesticides, artificial hormones, or antibiotics. To learn more about why sustainable agriculture works, visit Sustainable Table's [Introduction to Sustainability](#) section.

What is Factory Farming?

Factory farming takes a mechanized approach to agriculture, based on the assumption that raising more animals in smaller spaces is more efficient than letting them live and graze naturally, and therefore more profitable. What this assumption ignores are the problems created when the realities of living creatures – what they eat, how they behave, how much waste they create – are at odds with the industrial systems created to maximize their production. But factory farms don't just ignore the problems created by intensive animal confinement, they have found ways to foist those problems onto society. Rather than responsibly manage animal waste, take measures to prevent air pollution and soil contamination, or keep their animals clean and healthy, these large scale farms take short cuts and receive government subsidies, forcing taxpayers to pay for their problems. If factory farms were forced to pay for these costs rather than taxpayers, the system would no longer be seen as profitable. Consumers are already starting to notice this and are turning to organic and sustainable food instead.

What Are the Most Important Issues?

Both natural and synthetic hormones are regularly administered to factory farmed beef cattle to make them grow faster. rBGH is a genetically engineered hormone that increases dairy cows' milk production, but also threatens their health. Studies have shown that hormones added to meat and dairy products may have negative effects on human health.

Antibiotics

The Union of Concerned Scientists estimates that 70% of all antimicrobials used in the United States are given to farm animals, to compensate for filthy conditions as well as to promote growth. Increasingly, traditional antibiotics (which are a type of antimicrobial) are losing their effectiveness in the battle against infectious diseases because of antibiotic overuse which creates resistant bacteria.

Mad cow disease

Mad cow disease is a brain-wasting disease that is spread among cows through factory farm feeding practices. Humans can contract the disease by eating infected meat. There is no cure and the disease is always fatal.

Genetic engineering

Genetic engineering (GE) is the process of transferring specific traits, or genes, from one organism into a different plant or animal. Much concern has been raised over the inadequate testing of the effects of genetic engineering on humans and the environment. And once released into the environment, these genetically engineered organisms cannot be cleaned up or recalled.

Ask

It is your right as a consumer to know how the food you eat was produced. Use Sustainable Table's Questions to Ask section and come equipped to the farm, store or restaurant to really - find out about what you're eating. You can print out "Questions to Ask" cards to carry with you, so that you'll always be ready to know about your food. Another way of "asking" for sustainably-raised meat and dairy is to leave an "I Care" card behind. By telling your local stores and restaurants that you care where your food comes from, you are sending a message that you want these products and you'll frequent establishments that carry them.

Act

Visit the Eat Well Guide

Finding farms, stores and restaurants in your area that serve sustainable meat and dairy is the first step to incorporating this food into your diet. The Eat Well Guide lists over 9,000 sustainable farms, stores, restaurants, bed & breakfasts, and online retailers by zip code, making it easy for someone new to sustainability to take the first step. If changing your whole diet sounds intimidating, take it one step at a time. Decide on a type of meat, dairy product, or even fruit or vegetable that you will start buying organically or sustainably. Once you get comfortable with that, pick another food.

Know Your Farmer

The only real way to know what's in your food is to talk to the person who grew it. There are many ways, even for urban dwellers, to start buying directly from local farms, either through farmers markets or community supported agriculture groups.

Get Involved

This is an exciting movement that's sweeping across the country – and planet! Invite your friends and neighbors over for sustainable dinners, start a sustainable book club or plant a garden. Visit our Get Involved section for more ideas. Have you ever wondered exactly how sustainable agriculture is better than industrial? The chart below is an easy reference that quickly and easily shows how sustainable farming is much more beneficial than industrial agriculture.

Health Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Sustainable farms produce foods <i>without excessive use of pesticides and other hazardous chemical inputs</i>. Research indicates that sustainable foods are often healthier than their industrially-produced counterparts. • Organic foods contain higher levels of antioxidants, which help fight certain types of cancer.ⁱ • Organic crops contain significantly more vitamin C, iron, magnesium, and phosphorus.ⁱⁱ 	<ul style="list-style-type: none"> • Industrial crops contain more nitrates.^{iv} • Heavy use of pesticides is associated with elevated cancer risks.ⁱⁱⁱ • Unsanitary conditions in factory farms and industrial slaughterhouses cause high levels of meat contamination which has resulted in recurrent epidemics of foodborne illness. In the U.S., foodborne illness sickens 76 million people, causes 325,000 hospitalizations, and kills 5,000 people every year.^v

	<ul style="list-style-type: none"> • A 1998 study by Consumer Reports revealed that 71% of store-bought chicken were contaminated with Campylobacter and/or Salmonella, bacterial contaminants responsible for thousands of deaths and millions of sicknesses.^{vi} • Industrial agriculture operations strive to increase production and maximize profits without regard for human health.
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Environmental Issues

<p>Sustainable Agriculture</p> <ul style="list-style-type: none"> • Sustainable farmers recognize the importance of protecting the natural environment. These individuals manage their farms in a responsible manner, maintaining the fertility of the land and preserving resources for future generations. 	<p>Industrial Agriculture</p> <ul style="list-style-type: none"> • Industrial agriculture practices are responsible for a host of environmental problems; in addition to causing massive topsoil erosion, aquifer depletion, and the reduction of genetic diversity, factory farms pollute our air, water, and soil with hazardous gasses, toxic chemicals, and harmful pathogens.
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Animal Waste Issues

<p>Sustainable Agriculture</p> <ul style="list-style-type: none"> • Sustainable farms do not raise more animals than the land is capable of sustaining. Farmers are able to use manure as fertilizer for their crops. This <i>eliminates the need for chemical fertilizers and avoids the pollution problems</i> associated with manure lagoons. 	<p>Industrial Agriculture</p> <ul style="list-style-type: none"> • Industrial farms cause \$34.7 billion worth of environmental damage in the U.S. each year.^{vii} • Since factory farms concentrate an enormous amount of animals in a very small area, the farms generate far too much manure to be absorbed by the land. Excess manure is stored in huge holding tanks or manure lagoons, and is often over-applied to fields. Not only does all this manure create an overwhelming stench, it also releases hazardous gases into the air, and often contaminates local groundwater and surrounding waterways with pathogens and excess nutrients. • A Factory Farm containing 5,000 hogs can produce as much solid waste as a human city of 20,000 – unlike cities, these industrial farms are not required to have a sewage treatment plan.^{viii}
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Water Waste Issues

<p>Sustainable Agriculture</p> <ul style="list-style-type: none"> • Sustainable farms <i>conserve scarce water resources</i> and protect local aquifers from being contaminated with harmful pollutants. 	<p>Industrial Agriculture</p> <ul style="list-style-type: none"> • Industrial agricultural practices contaminate groundwater and surface water with toxic pesticides, fertilizers, hormone residue, antibiotics residue, and harmful pathogens contained in manure. This damages aquatic ecosystems and poses a serious threat to human health. • According to the EPA, agricultural practices are
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	<p>responsible for 70% of all pollution in U.S. rivers and streams.^{ix}</p> <ul style="list-style-type: none"> • Many operations consume water at an unsustainable rate, causing aquifer depletion and ground subsidence.
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Soil Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Sustainable farms conserve our valuable soil resources through erosion-prevention methods such as windbreaks, use of cover crops, continual addition of organic matter to the land, and no-tillage or low-impact tillage techniques. • Minimal use of chemical pesticides and elimination of excess fertilizer ensures that existing soil remains uncontaminated. 	<ul style="list-style-type: none"> • Industrial farming causes chronic erosion due to extensive plowing, lack of cover crops, and failure to replenish soils with organic materials. • Excessive use of chemical pesticides and fertilizers causes soil contamination.

Pesticides Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Sustainable farms often rely upon alternative pest control methods such as habitat manipulation, biological control, and use of pest-resistant plant varieties. 	<ul style="list-style-type: none"> • Chemical pesticides are either excluded from production entirely, or used only in small amounts when other pest-control methods are ineffective. • Industrial agriculture operations use huge amounts of toxic pesticides to eliminate pests. These chemicals are known to damage the environment and human health. • According to the EPA, over 1 billion tons of pesticides are used in the U.S. every year.^x • The American Association of Poison Control Centers estimates that in 2002, 69,000 children suffered from pesticide related poisoning or exposure to poisonous pesticides.^{xi}

Antibiotics Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Animals are raised without routine use of antibiotics. Antibiotics are administered only if an animal is sick. Other farmers (such as organic farmers) do not give antibiotics to their animals at all. If sick, the animal is pulled from the herd and treated, but the meat is not sold as "no antibiotics used." 	<ul style="list-style-type: none"> • Every year, approximately 25 million pounds of antibiotics and related drugs are administered to animals for non-therapeutic purposes. This is more than 8 times the amount used to treat disease in humans.^{xii} • Overuse of antibiotics is contributing to antibiotic resistance, making human medicines less effective and causing U.S. health care costs to increase by \$4 billion each year.^{xiii i}

Hormone Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Hormones are not administered to animals on sustainable farms. This protects human health, animal health, and the natural environment, which is otherwise polluted with hormone residues contained in manure. 	<ul style="list-style-type: none"> • Hormones are given to beef cattle in order to speed up their growth, and they are administered to about two-thirds of American cattle. ^{xiv} This widespread use of artificial hormones is concerning, because no comprehensive studies had been conducted to determine whether hormone residues in meat can be cancer-causing. ^{xv} • Industrial dairy farms also use a hormone called <u>rBGH</u> to increase milk production. Cows injected with rBGH have been known to develop an udder disease called mastitis, hoof diseases, open sores and internal bleeding. ^{xvi} • rBGH has been proven to damage the health of cows and is banned by the EU and Canada

Genetic Diversity Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Sustainable farms help preserve genetic diversity by raising a wide range of animal breeds and crop varieties. • These farmers raise animal and plant varieties that are adapted to the surrounding environment, thus avoiding reliance upon large quantities of chemical inputs or genetically modified crop varieties.. 	<ul style="list-style-type: none"> • Large-scale industrial farms rely upon monoculture crop systems, thereby reducing genetic diversity. They also reduce genetic diversity in animals because they only raise a few selected breeds. • The use of genetically engineered crops further impedes genetic diversity

Fossil Fuel Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Sustainable farms minimize fossil fuel consumption through techniques such as no-tillage or low-tillage farming, efficient application of manure, and crop rotation. • Small-scale, organic farming operations have been shown to use 60% less fossil fuel per unit of food than conventional industrial farms. ^{xvii} 	<ul style="list-style-type: none"> • Energy-intensive production methods are used to produce food. Large amounts of <u>fossil fuel</u> are required to plow fields, produce fertilizers, process foods, and transport foods. • As a result of industrial farming practices, 17% of all fossil fuel used in the U.S. is currently consumed by the food production system. ^{xviii}

Transportation Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> • Rather than shipping food thousands of miles away, sustainable farms <u>sell produce locally</u> through farmers markets, farm stands, or community supported agriculture (CSA) programs. This prevents environmental damage and human health problems caused by transportation-generated pollution. • Foods purchased locally are also fresher, and 	<ul style="list-style-type: none"> • Large-scale, centralized production requires extensive food transportation. • Conventional produce, for example, is shipped an average of 1,500 miles before reaching consumers. • In order to facilitate long distance shipment, foods are highly processed, supplemented with preservatives, and require excessive packaging.

therefore contain more nutrients.	
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Animal Welfare Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> Sustainably-raised animals are treated humanely and are permitted to carry out natural behaviors such as rooting in the dirt and pecking the ground. 	<ul style="list-style-type: none"> Factory-farmed animals are crammed together in confined areas without access to sunlight, fresh air, or open pasture. Unsanitary conditions in animal confinement units cause widespread disease and aggressive behavior. Most animals never see sunlight and their feet never touch the ground

Economic Development/Community Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> Sustainable farms support local economies by providing jobs for members of the community and by purchasing supplies and materials from local businesses. A study by the University of Minnesota Extension Service revealed that small farms with gross income of \$100,000 made almost 95% of total expenditures within their local communities. Large farms with gross income greater than \$900,000 spent less than 20% locally.^{xix} Owners of small, sustainable farms are actively involved in their communities, boosting the level of civic participation and helping to build resilient rural communities. 	<ul style="list-style-type: none"> Factory farms hire as few workers as possible and typically purchase equipment, supplies, and animal feed from companies outside the region. This causes economic stagnation in struggling rural communities. Local governments are often forced to pay for expensive infrastructure development projects, such as paving roads for large trucks. A 1996 study determined that the value of homes in Iowa located within 1/2 mile of a CAFO were reduced by 40%, within 1 mile by 30%, 1.5 miles by 20% and 2 miles by 10%.^{xx} The focus is on gaining short-term profit; with minimal concern for the environment, the health and safety of future generations, or the long-term security of rural communities

Worker Issues

Sustainable Agriculture	Industrial Agriculture
<ul style="list-style-type: none"> Sustainable farm owners provide a safe working environment and treat their employees with dignity and respect. 	<ul style="list-style-type: none"> Farm laborers often endure dangerous working conditions which cause significant damage to their health. Among the most serious hazards faced by workers is routine exposure to dust and gases emitted from sources of concentrated manure. 58% of swine confinement workers suffer from chronic bronchitis – this is three times higher than the incidence of chronic bronchitis among workers in conventional swine housing units.^{xxi}

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