

Raising animals to eat is extremely inefficient because of the large quantity of grain needed to feed those animals. According to the USDA, it takes more than 16 pounds of grain to produce 1 pound of meat.⁷ “The world’s cattle alone consume a quantity of food equal to the caloric needs of 8.7 billion people – more than all the people on earth.”⁸ All of this grain production requires land. Close to 30% of the earth’s ice-free land is directly or indirectly involved in livestock production, according to the United Nation’s Food and Agriculture Organization. In the U.S. a full 80% of agricultural land is used in some way to raise animals for meat.⁹

The U.N. also estimates that livestock production generates nearly a fifth of the world’s greenhouse gases — even more than transportation. “Livestock manure is responsible for 18% of the greenhouse gasses that cause global warming, mostly in the form of methane and nitrous oxide, both of which have significantly higher heat trapping capacity than carbon dioxide.”¹⁰

Today’s farms are not the green pastures and red barns that most of us imagine, but are rather large industrial factories. The U.S. government calls these industrial facilities **CAFOs (concentrated animal feeding operations)**. Factory farms produce a large volume of food, and create large profits, most often at the expense of animal welfare, food safety and the environment.¹¹ Cows, chickens and pigs are no longer raised in open fields but rather in cramped spaces where they can barely stand, let alone walk around. Chickens are raised in unlit warehouses and subjected to ‘forced molting’ or starvation to make them lay more eggs. Many animals are mutilated – pig’s tails and testicles are cut off and their teeth are yanked out – all without any painkillers or anesthesia.¹² According to the American Veterinary Medical Association, tail docking is conducted to prevent biting and cannibalism, and castration to control aggressive behavior. These are just a few examples of the many abuses animals endure in industrial agriculture.

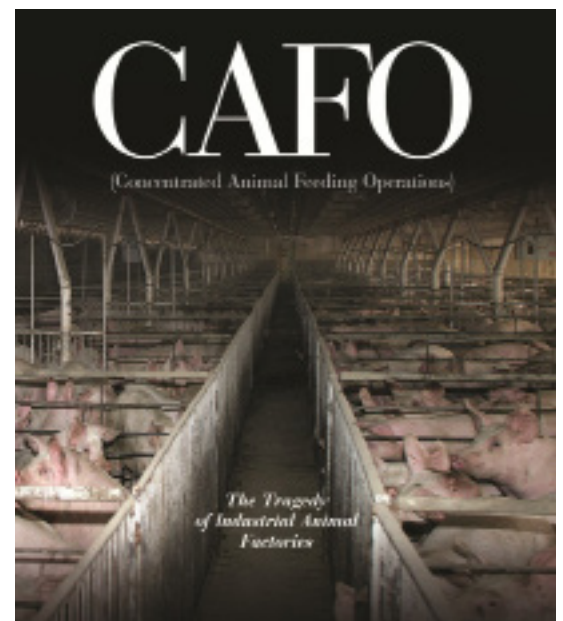
The over use of antibiotics is another rampant problem that plagues CAFOs. According to data released in 2010 by the FDA, almost 80% of the antibiotics sold in 2009 were given to livestock and poultry.¹³ Because of the horrible, filthy living conditions common to factory farms, antibiotics are given regularly to animals, even healthy ones, to control diseases.¹⁴ Increasingly, the world’s meat, milk, eggs and seafood are being produced in factory farms, presenting serious moral and ethical, not to mention health concerns for our entire population and the planet.¹⁵

AGRICULTURAL POLLUTION

Factory farms are also America’s biggest source of pollution. According to the Environmental Protection Agency, waste from cattle, chickens, and hogs has polluted 35,000 miles of rivers in 22 states and contaminated groundwater in 17 states.¹⁶



Animals are no longer living on farms where the land can absorb their waste and return it to the soil as nutritional amendments. Instead, animal waste from factory farms is contained in massive lagoons. These large and poorly contained pools of animal waste can and do leak into groundwater, rivers and streams, and the ocean. “To take animals off farms and put them on feedlots is to take an elegant solution — animals replenishing the fertility that crops deplete — and neatly divide it into two problems: a fertility problem on the farm and a pollution problem on the feedlot. The former problem is remedied with fossil-fuel fertilizer; the latter is remedied not at all.” Remarkably, there are currently no federal guidelines that regulate how the trillions of pounds of concentrated, untreated animal feces are stored, treated or disposed of.¹⁷



UNSUSTAINABLE FISHING PRACTICES

While the environmental and animal abuse issues associated with eating meat, poultry and dairy tend to be more widely known, many people are still unaware of the various concerns related to consumption of fish and other sea creatures. Many people are surprised to learn that earth’s marine ecosystem hangs in a precarious balance. Overfishing - catching fish faster than they can reproduce - characterizes nearly all commercial fishing ventures today. According to the Food and Agriculture Organization of the United Nations, 34% of assessed fish stocks are fished at levels that exceed biological sustainability.¹⁸ Alongside overfishing, there is the problem of **bycatch**: unwanted fish and other sea creatures that get thrown away after they are unintentionally caught by fishing nets. Dolphins, sea turtles, seals,

birds and whales all get accidentally caught in fishing gear and drown as a result. Seabirds, including endangered albatrosses, drown when they snatch baited hooks and are pulled under water. The UN estimates that 1 in 4 animals caught in nets die as bycatch. This not only hurts the animals themselves, but affects us all, as the animals we catch and throw away have important roles to play in marine food webs. Often bycatch takes young fish that could rebuild depleted populations if they were allowed to grow and breed. Additionally, many modern fishing methods damage the seafloor, a necessary habitat for shellfish and other kinds of fish. Dragging, trawling and dredging are other fishing methods where nets and chain mesh are dragged along the seafloor, destroying coral reefs, kelp forests and other natural feeding and breeding areas for marine life.

Global fish farming, or aquaculture, may at first seem like a better option, but it is far from perfect. Approximately 40% of the seafood consumed today comes from aquaculture and the greatest demand is for top-of-the-food chain, carnivorous fish such as salmon, tuna and shrimp. Since these fish are carnivores they must be fed other, smaller fish, the majority of which are harvested from the open ocean. An astonishing 37% of all global seafood is now ground into fishmeal which is used to feed other fish as well as livestock. And, much like CAFOs, industrial scale aquaculture causes a tremendous amount of animal waste, which destroys coastal habitats. Because aquaculture tanks and enclosures can be crowded and dirty, antibiotics are regularly used to control infections and outbreaks of disease. While much research is being done to develop safer, healthier aquaculture methods, it is clear that the skyrocketing global demand for seafood is quickly outpacing current supplies and capacity.

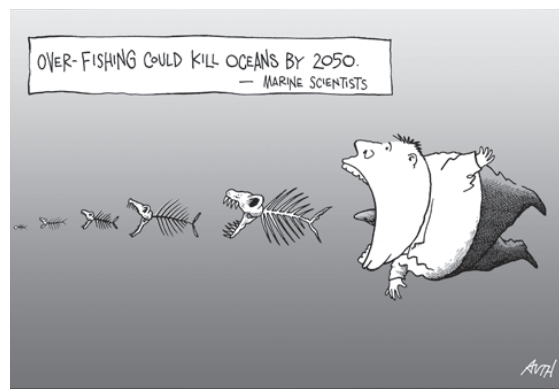
U.S. SUBSIDIES AND THE PRICE OF CHEAP FOOD

U.S. Government subsidies have led to the mass production of grains like corn, wheat and soy, that are the central ingredients in most highly processed junk foods. Corn contributes 554 calories a day to America's per capita food supply, and soy another 257 calories. Add wheat (768 calories) and rice (91), and you can see there isn't a whole lot of room left in the American stomach for any other foods.¹⁹ The inexpensive, low-nutrient foods that are derived from various combinations of processed corn, soy and wheat have flooded the marketplace and are a driving force behind our rising rates of obesity and diet-related diseases. Between 1985 and 2000, the price of fruits and vegetables increased 40%, while the price of soft drinks and other sugary, high-fat foods decreased 20%. "A study in the American Journal of Clinical Nutrition found that a dollar could buy 1,200 calories of potato chips or 875 calories of soda but just 250 calories of vegetables or 170 calories of fresh fruit."²⁰ The health impacts of this unbalanced food system weigh heaviest on children, lower income people and communities of color, who often do not have the same access to healthy, whole foods, and who are the most aggressively targeted by fast and junk food advertisers. By some estimates one out of three dollars spent on healthcare is due to our diet of highly processed, high fat, high sugar foods.²¹

GENETICALLY MODIFIED ORGANISMS (GMOs)

A **GMO (genetically modified organism)** is created in a laboratory when genes from one species are inserted into another in order to get a desired trait or characteristic. This process is also known as Genetic Engineering (GE) or Genetic Modification (GM).²² While new drugs must undergo safety testing, the FDA does not require safety studies, so there are no human clinical trials of GM foods. The FDA has decided to allow GMOs into food without labeling. Scientist's requests for long-term safety studies were ignored.

GMOs are now found in more than 75% of (non-organic) foods sold in conventional grocery stores in the United States. Currently, the majority of certain commercialized crops grown in the U.S. are GM, including soy (94%), cotton (94%), and corn (92%).²³



Aquaculture Farm



Industrial Agriculture



Corn Crop

What the City of Santa Monica is Doing:

SANTA MONICA'S SUSTAINABLE FOOD COMMITMENT

The City of Santa Monica is committed to supporting sustainable, local, and organic food through its own purchasing, and by helping to make sustainable food more accessible to its residents. Santa Monica's Sustainable Food Commitment includes

1. Eat organic
2. Reduce conventional meat and dairy consumption
3. Avoid processed foods
4. Eat locally grown
5. Reduce packaging and food waste.

For more information on Santa Monica's sustainable foods effort visit <https://www.sustainablesm.org/food>



DO YOU...

- * EAT AT FAST FOOD RESTAURANTS?
- * THINK ABOUT WHERE YOUR FOOD CAME FROM OR HOW IT GOT TO YOU?
- * EAT MEAT AS PART OF EVERY MEAL?
- * EAT FOOD THAT HAS BEEN GENETICALLY MODIFIED?
- * EAT FOOD THAT IS NOT ORGANICALLY GROWN?

NOW YOU CAN...

1. EAT LESS MEAT AND DAIRY

Meat production has an incredible environmental impact. Raising animals for food requires more than half the water used in the United States and is the biggest polluter of our water and topsoil. Every meal makes a difference.

- Intergovernmental Panel on Climate Change (IPCC) Chairman in 2008 stated, "In terms of immediacy of action and the feasibility of bringing about reductions in a short period of time, choosing to eat less meat or eliminating meat entirely is one of the most important personal choices we can make to reduce climate change."

- * Go Cow Free, visit: <http://www.cowfreemondays.com/main/progress>

- Go Lacto-Ovo Vegetarian - this is a person who eats no meat, fish, fowl or animal byproducts (such as gelatin), or products containing them. An ovo-lacto vegetarian does, however, eat eggs and dairy products.

- Go Vegetarian - defined as the practice of not eating meat, poultry or fish or their by-products, and does not use dairy products or eggs.

- For further assistance with preparing meals that have little or no meat or dairy, try out

Santa Monica's Cookbook for a Sustainable Community. For more details visit: www.smgov.net/uploadedFiles/Departments/OSE/Food/Sustainable_Food_Recipes.pdf

Learn more about vegetarianism visit the International Vegetarian Union at ivu.org

- Go Vegan - Veganism excludes animal flesh (meat, poultry, fish and seafood), animal products (eggs and dairy), and usually excludes the wearing and use of animal products (leather, silk, wool, lanolin, or gelatin).

2. EAT ORGANIC AND SUSTAINABLY PRODUCED FOODS.

- Buy **organic foods**. Foods produced without synthetic fertilizers, herbicides, and/or pesticides and which have not been genetically modified or irradiated use fewer resources and require less energy than conventional farmed foods.
- Organics are especially important for infants and children since pesticides and herbicides concentrate in their smaller bodies.
- Organic foods have the added benefit of repairing some of the damage that has been done to the soil in the past by the use of synthetic chemicals. **Organic farming** practices in general return nutrients to soil and encourage the growth of healthy bacteria and fungi.
- Look for Certification Seals. The CA Organic Food Act of 1990 or the USDA Organic Seal signifies a third party guarantee that organic methods and materials were used in the production of the product.
- Talk to your farmer. Farmers' markets are great places to get organic produce at affordable prices. The USDA organic certification process is very expensive, takes many years, and for some farmers doesn't go far enough. Many of the farmers at your local market are using organic, or even beyond organic, farming methods but are not certified. Ask your farmers how they grow their food, if they use chemical fertilizers, pesticides or herbicides and support those that are growing sustainably.
 - Maintaining the integrity of organics. Not all organics are created equal. To see how your organic products rate, go to the Cornucopia Institute's Reports:
 - Organic Egg Scorecard at cornucopia.org/organic-egg-scorecard/
 - Dairy Report/Ratings at cornucopia.org/dairysurvey/index.html
- Look out for the "dirty dozen" and know the clean fifteen.



3. EAT LOCAL.

- Shop at farmers markets. Shopping at a farmer's market vs. Large chain grocery stores provides the following:
 - Great quality food
 - Competitive prices
 - Reduced ecological footprint, because produce is locally grown.
 - Support for local farmers
 - Brings communities together
- In Santa Monica, visit the following weekly farmer's markets:
 - Sunday, 2640 Main Street, 8:30am-1:30pm
 - Wednesday, Arizona Ave & 3rd Street, 8:30am-1:30pm
 - Saturday, Arizona Ave & 3rd Street, 8:00am-1:00pm
 - Saturday, 2200 Virginia Avenue, 8:00am-1:00pm

Visit localharvest.org to find your nearest farmers market or check out the L.A. Times interactive farmer's site projects.latimes.com/farmers-markets/.



Santa Monica Farmers' Market accepts EBT cards (electronics benefit transfer card). EBT CalFresh benefits info: You must have a social security number to apply, it is based on gross monthly income, depending on household size, most families can get at least \$100 and benefits up to \$250 a month. For more info: calfresh.ca.gov/



Shop at local independently owned grocery stores and restaurants.

- * Co-opportunity in Santa Monica.
- * Many neighborhoods have small grocery stores or marts that residents may only drop into once and a while for items they forgot to get at the grocery store. Talk with storeowners, because they own their own markets they are able to make changes easily to accommodate their customers. When they have customer support they can offer better and more cost competitive products.
- * Independent restaurants are more likely to make food from scratch and are better able to respond to your request for local, organic and sustainable food on their menu. Talk to the owners and ask for these things.

Join a Community Supported Agriculture (CSA) opportunity (See Support Tools for list)

- * You can buy directly from a local farm by subscribing to a CSA. Subscribers can pick up every week or bi-monthly a box of organic produce from a pickup area in their neighborhood (i.e. libraries, a subscriber's home, etc.) Cost of membership varies by farm and region.
- * CSAs promote sustainable agriculture in five ways:
 1. Provide farmers with direct outlets for farm products and ensures fair compensation.
 2. Encourage proper land stewardship by supporting farmers in transition to low or no chemical inputs.
 3. Strengthen local economies by keeping food dollars in local communities.
 4. Directly link producers with consumers allowing people to have a personal connection with their food and the land upon which it was produced.
 5. Make nutritious, affordable, wholesome food accessible to community members.
- * Go to www.localharvest.org to find the CSA options in your area.

Buy from organic delivery services. You can get organic food/products delivered right to your home. Check out the following:

- * Los Angeles Organic Vegetable Express (L.O.V.E.) – lovedelivery.com.
- * Spud – spud.com

Choosing local foods supports local economies and reduces pollution from transportation. Foods that are picked early for transportation are picked green and chemically treated to retain “freshness”.

4. CHANGE YOUR BEHAVIOR.

Dine-in instead of ordering take-out or delivery to reduce packaging and waste.

Refuse what you don't need (straws, utensils, lids, condiment packs, etc.) to reduce packing and waste.

Bring your own reusables (tumbler, container, straw, utensils, napkin, etc.) to reduce packing and waste.

Prepare more meals from whole unprocessed foods. Processed food is filled with unfamiliar and artificial fillers, colors, and flavors and uses significant amounts of energy in its production, transportation, and storage. Eating less processed food reduces packing and waste, directs more of your food dollar to farmers rather than mega food processing corporations, and is better for your health.

Eat seasonally. Seasonal foods are more likely to be from local sources, they will also be fresher, have more flavor, and be at their nutritional peak.

Eat 3-5 times a day. Smaller meals throughout the day help keep your energy levels up and reduce food waste.

Use scraps for stocks and soups. Wrap scraps in cheesecloth while soup or stock is at a low temperature (simmering) for a rich, full-bodied flavor.

- ❑ Compost fruits and veggie scraps, coffee grounds and leftover food from your plate. For more information on composting see the waste section.
- ❑ Create new meals using leftovers. Let your imagination flow. Combine leftover with what's in your pantry to create new meals that are delicious and fast.
- ❑ Plant seeds from your vegetables. If you have the space to plant seeds, you can plant the avocado pits, carrots tops, and seeds from your favorite fruits.

❑ 5. GROW YOUR OWN FOOD.

- ❑ Pick a spot in your yard with lots of sunlight, access to water, and get started with a small inexpensive collection of vegetables. Once you get started you will learn about the importance of soil fertility, biodiversity and balanced insect population. Recognize the longer you farm, the better farmer you will become, the first step is to begin.
- ❑ Sign up for a plot in your local community garden. There may be a waiting list but put your name in now and practice where you can until your name is selected. Check the American Community Gardening Association communitygarden.org for the garden near you.
- ❑ Start a container garden. There are many basic window or container gardens available online, with Earthbox.com providing a complete, mobile, easy to use system.
- ❑ For a comprehensive resource on everything from composting to seed saving refer to- Food Not Lawns: How to Turn Your Yard Into a Garden and Your Neighborhood Into a Community, by H.C. Flores.
- ❑ Growing your own food is good for your health and the environment. For some great tips on starting your own garden, read 'How to Start an Organic Garden in 9 Easy Steps' available at goodhousekeeping.com/home/gardening/organic-gardening-



❑ 6. AVOID FACTORY FARMED MEATS.

- ❑ Many of today's farms look more like industrial facilities, rather than the peaceful setting of the traditional American family farm. These livestock operations are commonly referred to as factory farms, confined or concentrated animal feeding operations (CAFOs), animal feeding operations (AFOs), or industrial livestock operations. Factory farms are owned by corporations, so other common terms used are corporate agriculture or agribusiness. Visit themeatrix.com for a humorous and educational look at how factory farms work.
- ❑ When purchasing meat opt for certified organic and grass finished. As Michael Pollan states in the Omnivore's Dilemma, all cows start off being "grass fed" so this label alone does not necessarily mean that the cows ate grass throughout their lives. Grass finished beef has a premium price, so that will also help you determine which is grass finished beef.
 - * Take a look at EWG's Meat Eater's Guide to Climate Change + Health for tips and resources on more environmentally-friendly eating.
 - * Check out The Union of Concerned Scientists' Grade A Choice? Solutions for Deforestation-Free Meat at http://www.ucsusa.org/assets/documents/global_warming/Solutions-for-Deforestation-Free-Meat.pdf



□ There is no “official” definition of a factory farm, but they share some or all of the following characteristics:

- * Hundreds to thousands of animals (cows, pigs, chickens or turkeys mainly) confined together, using as little space as possible, with little or no access to sunlight, fresh air or natural movement. In some facilities, the number of animals produced yearly is in the millions.
- * The use of antibiotics, chemicals and/or hormones to promote faster growth and ward off disease that would otherwise run rampant in factory farm conditions.
- * The use of “lagoons” to store massive amounts of raw manure. The lagoons are not regulated and are generally unlined which means the waste frequently pollutes local ground water resources.
- * Metal buildings that confine animals indoors.
- * The use of cages to restrict the natural behavior of animals.
- * Mutilation of animals such as debeaking poultry, clipping pigs’ tails and teeth, and docking cows’ tails, which is considered “standard” procedure.
- * The corporation that owns/controls the CAFO also owns the feed company, slaughterhouse, and final stages of production (also referred to as vertical integration).
- * Separation of the ownership, management, and labor of the operation. Industrial agriculture is also moving toward contract growing, where family farmers sign away ownership of their animals through a contract with a major corporation. The corporation controls all aspects of raising the animals, and the farmer is left with the risk, overhead, waste and any dead animals.
- * The owner receives price premiums and preferential access to markets or credits because of the size of the facility or the contract signed with one particular corporation.
- * The facility has the capacity to negatively impact neighboring property values.
- * Emphasizes high volume and profit with little or no regard for environmental quality, human health, safe food, humane treatment of animals, and the rural economy. Visit factoryfarming.org for more information.



□ 7. EAT ONLY SAFE SUSTAINABLE SEAFOOD.

Visit montereybayaquarium.org to download a copy of this helpful card.

□ Ocean fish are wildlife—the last wild creatures that people hunt on a large scale. Once it seemed the ocean would supply an endless bounty of seafood. Today, we’re discovering its limits. Between 1950 and 1994, ocean fishermen increased their catch 400% by doubling the number of boats and using more effective fishing gear.⁴⁸

□ Fisheries booms, then bust-75% of the world’s fisheries require immediate steps to freeze or reduce fishing to ensure a future supply of fish! Over fishing pushes the fish population lower and lower, until fish are so few that fishermen can’t make a living any more. Many fisheries have already collapsed, throwing thousands of people out of work. All over the world, fishery after fishery booms as we send in more boats, then busts as the fish population crashes.



The Marine Stewardship Council Chain of Custody standard for seafood traceability ensures that the MSC label is only displayed on seafood from a MSC certified sustainable fishery.

□ 8. BOYCOTT PRODUCTS MADE OF GENETICALLY MODIFIED CROPS.

Improve your health and reduce waste and exposure to GMO’s by purchasing less heavily processed and packaged foods.

□ The most widely grown GMO crops are corn, soybeans, canola (also known as rapeseed) and cotton. Almost all GMOs grown today are in one of two varieties: “insect resistant” and “herbicide tolerant” crops. The insect resistant crops are also known as “plant pesticides” because the crop is considered (and regulated as) a new insecticide. The crop produces an insect toxin as it grows, in every cell of the plant throughout the entire growing season. When you eat GMO insect resistant corn, for example, you are



eating a pesticide.

9. SUPPORT SUSTAINABLE GROWING PRACTICES.

- Support Shade Grown Fair Trade coffee. Coffee is the second most traded commodity in the world economy, after oil. The coffee you drink and the means by which it is produced have widespread economic and environmental effects. A growing number of companies are committed to selling organic shade-grown coffee that has the added benefit of providing vital habitat for migratory birds. Some suppliers are also promoting environmentally sustainable coffee production as a means to help poor communities become economically self-sufficient. Visit the North West Shade Grown Coffee Campaign at shadecoffee.org to learn more and to find out where to buy Shade Grown Coffee.



Support Fair Trade farming practices. Coffee, tea, cocoa, fruit, sugar, honey, rice, quinoa, vanilla, olive oil, flowers, spices, and wine are Fair Trade products that can be found in the US.



Look for the RSPO label to ensure you purchase products made with certified sustainable palm oil. This label gives you the confidence that the palm oil was produced in a socially and environmentally responsible way. Can't find the RSPO label? Look for the Green Palm label.

- Avoid Palm Oil or only purchased products with the certification label above. Why? See Palm Oil block on page 15. For more information visit: <http://www.worldwildlife.org/pages/which-everyday-products-contain-palm-oil>

10. GET ACTIVE.

- Volunteer

- * Santa Monica Malibu Unified School District Salad Bar Program
- * Community Supported Agriculture farm
- * Farmer's Markets
- * Join the Cool Foods Campaign. The campaign was joined by the Santa Monica city council, the Santa Monica Task Force on the Environment & the Santa Monica Malibu Unified School District. Join the campaign today! coolfoodscampaign.org

- Educate yourself on the latest sustainable legislative issues

- Write a letter

- * Tell your legislators to support local food, tough organic labeling standards and programs that help farmers transition to organic methods. Visit the Organic Farming Research Foundation at ofrr.org.
- * Tell your legislators to place a ban on the over use of antibiotics in meat and dairy production.
- * If your favorite meat producer is not practicing humane farming practices write to them letting them know you will no longer eat their meat products.
- * Write your representatives telling them to support fair trade.

- Participate in the following thematic events:

- * National Vegetarian Week – Fourth week of May
- * National Cooperative Month – October
- * Meatless Monday campaign

- Consider a Green Job, or making your current job more sustainable.

GREEN JOBS – FOOD

- * **Whole Foods Market** – An opportunity to work for an eco friendly, natural foods market with openings in the seafood, produce, meat, bakery and grocery retail teams. Whole Foods is looking for enthusiastic individuals with some experience in the customer service.
 - Visit wholefoodsmarket.com for more information on job openings nationwide, or research other eco-friendly retailers.

- * **Organic/Sustainable Farmers & Ranchers** – Farmers and ranchers, on an ownership or rental basis, operate farms, ranches, greenhouses, nurseries, timber tracts or other agricultural production establishments which produce crops, horticultural specialties, livestock, poultry, finfish, shellfish or animal specialties. Sustainable agriculture refers to the ability of a farm to produce food indefinitely without causing irreversible damage to ecosystem health. While the traditional preparation for this occupation was on-the-job training, the completion of an associate's or bachelor's degree is becoming increasingly important. The large number of farmers expected to retire or leave the profession over the next decade will create job opportunities. The Typical salary is between \$29,000 and \$47,000.
 - Visit sustainableagriculture.net for more information

- * **Organic Farm Certification Specialist** – Review and process farmer and/or producer client applications and file for compliance with the USDA National Organic Standards Program and other programs. Employers look for a two-year, undergraduate, or graduate degree in agriculture, natural resources, environmental science, food science, or a related field. Applicants will need one or more year's education, training, or work experience in sustainable or conventional agriculture or food processing, with a working knowledge of organic and conventional farming systems. Bilingual English and Spanish is strongly desired.
 - Go to ioia.net – the Independent Organic Inspectors Association trains certification specialists.
 - Visit ccof.org for job listings.

- * **Aquacultural Managers/Sustainable Aquaculture Farm & Fish Hatchery Managers** – Aquacultural managers direct and coordinate, through subordinate supervisory personnel, activities of workers engaged in fish hatchery production for corporations, cooperatives or other owners. A bachelor's degree in wildlife science, or a related field, plus extensive experience in related occupations, is the typical requirement. For some jobs, an equivalent combination of education and experience is acceptable. Aquaculture may continue to provide some new employment opportunities due to concerns about overfishing and the depletion of the stock of some wild fish species. The Typical salary ranges from \$39,800 to \$71,800/year.
 - For more information on jobs in Aquaculture visit the American Fisheries Society at fisheries.org



REFERENCES

Green Careers – Choosing Work for a Sustainable Future by Jim Cassio & Alice Rush
Green Jobs: A Guide to Eco-Friendly Employment by Llewellyn, Hendrix, Golden ISBN-10: 1-59869-872-9
Great Jobs for Environmental Studies Majors by Julie DeGalan & Bryon Middlekauff ISBN 978-0-07-149315-4

GLOSSARY OF KEY TERMS

FOOD

Agribusiness: a large-scale farming enterprise.

Agriculture: the science and practice of producing crops and livestock from the natural resources of the earth.

Bycatch: the inadvertent capture of nontarget species.

Concentrated Animal Feeding Operations (CAFO): huge outdoor pens or warehouses where large numbers of animals are tightly packed into cages and fed a high calorie diet and often growth hormones in order to bring them to full market slaughter weight as quickly as possible. Because of the sheer volume of animals and the focus on short term profits instead of the long term health of the animals, they often become sick due to filthy conditions and are treated with antibiotics which ultimately end up in the meat, eggs and dairy products we consume.

Community Gardens: gardens that allow people to plant and grow their own vegetables and flowers in small plots. As a result, people grow relationships and a close connection to the land and city. These gardens are available to the public at large for a minimal fee.

Conventional/Industrial Farming: a method of farming that includes the use of commercial fertilizers and pesticides to produce vegetables and crops.

Free Range: (of livestock and domestic poultry) permitted to graze or forage for grain, etc., rather than being confined to a feedlot or a small enclosure.

Genetically Modified Organisms (GMO): is “an organism that has been modified by the insertion of DNA by human intention. It is usually DNA, which has been modified or ‘engineered’ to suit a particular purpose (recombinant DNA is the same thing). The DNA can be from a foreign organism, from the same organism or it may be a sequence synthesized in a laboratory.” (Lynn M. Hartweek, Ph.D., Agronomy Department, University of Wisconsin, Madison, May 1997)

Organic: non gmo food raised without chemicals and processed without additives.

Organic Farming: a method of food production without the use of synthetic fertilizers, pesticides or gmo's.shopping

ENDNOTES

- 1 Kingsolver, Barbara, Steven L. Hopp, and Camille Kingsolver. *Animal, vegetable, miracle: one year of seasonal eating*. London: Faber and Faber, 2010. Print.
- 2 Ibid.
- 3 Fenney, Heather. "Increasing Support for Sustainable Food in the City of Santa Monica." SMGOV. N.p., 1 June 2009. Web. 21 Aug. 2014.
- 4 Wood, Stanley, Kate Sebastian, and Sara J. Scherr. "Agroecosystems." IFPRI. N.p., n.d. Web. 21 Aug. 2014.
5. "Growing Greenhouse Gas Emissions Due to Meat Production." United Nations Environment Programme. N.p., Oct. 2012. Web.
6. "Facts on Animal Farming and the Environment." One Green Planet. N.p., 12 Nov. 2012. Web.
- 7 Robbins, John. *The Food Revolution How Your Diet Can Help Save Your Life and Our World..* Online-Ausg. ed. Cork: Red Wheel Weiser, 2010. Print.
8. Robbins, John. *Diet for a new America how your food choices affect your health, your happiness, and the future of life on earth*. 25th anniversary ed. Novato, Calif.: H J Kramer, 2012. Print.
9. Bittman, Mark. "Rethinking the Meat-Guzzler." *The New York Times*. The New York Times, 26 Jan. 2008. Web. 24 Aug. 2014.
10. Lean, Geoffrey. "Cow 'emissions' more damaging to planet than CO2 from cars ." *The Independent*. Independent Digital News and Media, 10 Dec. 2006. Web. 25 Aug. 2014.
11. Industrial Livestock Production." GRACE Communications Foundation. N.p., n.d. Web. 25 Aug. 2014.
12. PETA. "The Pork Industry." PETA. N.p., n.d. Web. 25 Aug. 2014.
13. Loglisci, Ralph. "New FDA Numbers Reveal Food Animals Consume Lion's Share of Antibiotics." Center for a Livable Future. N.p., 23 Dec. 2013. Web. 25 Aug. 2014.
14. Industrial Livestock Production." GRACE Communications Foundation. N.p., n.d. Web. 25 Aug. 2014.
15. Imhoff, Dan. *CAFO (concentrated animal feeding operation): the tragedy of industrial animal factories*. San Rafael, Calif.: Earth Aware, 2010. Print.
16. "Pollution (Water, Air, Chemicals)." Food Empowerment Project. N.p., n.d. Web.
- 17 PETA. "Meat Production Wastes Natural Resources." PETA. N.p., n.d. Web. 19 Aug. 2014.
18. FAO. 2020. *The State of World Fisheries and Aquaculture 2020. Sustainability in action*. Rome. <https://doi.org/10.4060/ca9229en>
19. *The state of food insecurity in the world multiple dimensions of food security..* Rome: Food and Agriculture Organization of the United Nations, 2013. Print.
20. Pollan, Michael. *In defense of food: an eater's manifesto*. New York: Penguin Press, 2008. Print.
21. Walsh, Bryan. "Getting Real About the High Price of Cheap Food." *Time*. Time Inc., 21 Aug. 2009. Web. 25 Aug. 2014.
22. "Problem with Palm Oil Factsheet | Rainforest Action Network." Rainforest Action Network. N.p., n.d. Web. 25 Aug. 2014.
23. "Issues: | GE Foods." Center for Food Safety, www.centerforfoodsafety.org/issues/311/ge-foods/about-ge-foods. Web.
24. "Recent Trends in GE Adoption." USDA ERS - Recent Trends in GE Adoption, www.ers.usda.gov/data-products/adoption-of-genetically-engineered-crops-in-the-us/recent-trends-in-ge-adoption.aspx, Web. 2020.
26. "FAQs." Institute for Responsible Technology. N.p., n.d. Web. 25 Aug. 2014.
27. "Adoption of Genetically Engineered Crops in the U.S.: Recent Trends in GE Adoption." USDA ERS. N.p., 14 July 2014. Web. 25 Aug. 2014.
28. Wang, Xueqin, Yuanming Zhang, Jin Jiang, Weikang Yang, Hongxu Guo, and Yongfeng Hu. "Effects of spring-summer grazing on longitudinal dune surface in southern Gurbantunggut Desert." *Journal of Geographical Sciences* 19.3 (2009): 299-308. Springer. Web. 25 Aug. 2014.
- 29 "Sustainable Seafood." Tufts. N.p., n.d. Web. 25 Aug. 2014.