



# Greening the Food Shopping Experience

From Organic Produce and Meat to Eco-Friendly Cooking

The Information the Consumer Must Know

## Summary

If you are among a growing number of consumers in today's world, you care about issues such as the environment, human rights, and sustainability. Yet it is easy to be confused or even overwhelmed when making socially and environmentally responsible purchasing decisions, especially when it comes to what you eat and where you buy your food. This paper aims to clear up the murkiness related to sustainable food purchasing practices by taking you through each step of the food shopping process in order to help you understand how to make practical, eco-friendly, and socially just shopping decisions—from the plastic versus paper bag debate to what kind of organic produce and meat you should buy, right up to online grocery shopping tips and eco-friendly cooking solutions.

Being a “green” consumer doesn't mean just buying organic foods, but it includes looking at the ecological impacts of the entire shopping experience. After reading this paper, you will have an understanding of the following areas: what shopping bags to use, how to consume sustainably and how to green your cooking. The paper concludes with an overview of supermarkets' sustainability profiles.



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## Part I: First on the Grocery List: Bring your Reusable Bag, and Just Say No to Paper AND Plastic

According to Worldwatch Institute, 430,000 gallons of oil are required to create 1 million plastic bags. The Marine Conservation Society in the United Kingdom estimates that it takes 450 to 1000 years for plastic bags to biodegrade. Plastic never breaks down completely within marine environments; these plastic bags break down into ‘dust’, which includes biotoxins like polychlorinated biphenyls (PCBs) that accumulate and can be ingested by marine life, which is harmful for the entire food chain.<sup>1</sup>

### Environmental Impact of Plastic Bags

**They are not biodegradable.** Reusablebags.com state in their "Top Facts - Environmental Impact" section that, "Plastic bags don't biodegrade, they photodegrade—breaking down into smaller and smaller toxic bits contaminating soil and waterways and entering the food web when animals accidentally ingest."

**They are made from fossil fuel.** “Californians Against Waste” estimates that 12 million barrels of oil are used annually to produce the plastic bags used in the USA alone.

**They are difficult to recycle.** The New England EPA says, “Research from 2000 shows 20 percent of paper bags were recycled, while one percent of plastic bags were recycled.” Resuablebags.com in the "Top Facts Section" of their website estimates that “8 billion pounds of plastic bags, wraps and sacks enter the waste stream every year in the US alone.”<sup>2</sup>

### FAQ's About Plastic Grocery Bags

#### Is reusing plastic grocery bags the answer?

- No. Although some people reuse their bags for cleaning up dog waste and as trashcan liners, the majority of people do not.
- When using the bag a second time, it is considered a “free bag.” But this is not the

case. You are paying for the bag—it is just hidden in other costs and impacts to the environment.

- Disposable bags can cost cities up to 17 cents per bag for disposal, which impacts you, the taxpayer.<sup>3</sup>

### Is recycling plastic bags the answer?

- No. Plastic grocery bags are rarely recycled. Currently, less than 5% of plastic bags are recycled. For information on how to recycle plastic bags properly, please see the box titled “How to Recycle Plastic Bags in 5 steps.”
- Some argue that plastic recycling is not an efficient use of our precious energy resources.
- The focus on recycling encourages over-consumption to some degree. It allows consumers to think that they can throw away goods because they are recyclable.<sup>4</sup>

### What products are made from recycled plastic bags?

- The majority of recycled plastic bags are turned into composite lumber, which is generally comprised of two equal substances: sawdust and plastic bags.
- Lumber manufactured from sawdust and plastic bags is used for a variety of items such as wooden structures like doorframes, window frames, and outdoor decks.
- Recycled plastic bags are also used to make post-consumer resin. This resin is used in the production of new plastic bags, crates, pipes, and containers.<sup>5</sup>
- To recycle the plastic bags, they are shredded into pellets that can be used for new bags in

addition to plastic lumber. Plastic bags with recycled content are usually more green or gray than those without recycled plastic content.<sup>6</sup>

### Recycled Plastic Bags: A Fashion Statement

- Recycled plastic bags can be made into fashion statements: wallets, purses, and more. Here are some links to pique your interest on other uses for plastic bags.
- **Wallets:**  
<http://thevibe.socialvibe.com/index.php/2009/02/06/wallets-made-from-recycled-plastic-bags/>
- **General Plastic Bag Crafts**—from raincoats to dresses to plastic bag yarn:  
[http://blog.craftzine.com/archive/2007/08/plastic\\_bag\\_crafts.html](http://blog.craftzine.com/archive/2007/08/plastic_bag_crafts.html).
- **Instructions on Making Plastic Bag Yarn:**  
<http://www.myrecycledbags.com/2007/02/17/instructions-for-cutting-plastic-bags-creating-recycled-plastic-yarn/>.

### Is using a paper grocery bag the answer?

- No. The best choice is to always use a **reusable bag**. During manufacturing, both paper and plastic bags emit greenhouse gases that contribute to global climate change, in addition to creating water pollution and using raw materials and energy.
- Each high quality reusable bag has the ability to eliminate hundreds to thousands of plastic bags over the course of its lifetime.
- Although most people are aware that paper bags are recyclable, only about 20% of them are actually recycled.<sup>7</sup>

## What kind of reusable bag should I use?

- There are many sources for reusable bag materials like organic cotton, hemp and polypropylene, all made in the United States.
- “A reusable grocery bag made from recycled plastic is not necessarily better than using a reusable bag made from virgin plastic. For instance, the recycling process typically involves transportation of the discarded goods from the U.S. to Asia where environmental regulations aren’t as stringent. The raw materials are reprocessed to make the new material, which is shipped back to the U. S. for assembly and transport to a retailer. This entire journey uses petroleum resources and creates harmful emissions.”<sup>8</sup>

## How can I remember to bring bags to the store?

- Always start your grocery list with “Bring Bags.”
- Keep a collapsible bag in your purse or briefcase for those emergency runs to the stores.
- Keep your bags in your car trunk.

## Paper or Plastic: The Verdict

Both paper and plastic bags require lots and lots of resources and energy, and proper recycling requires diligence from both the consumer and the municipal waste collector or private recycling company. A lot of variables contribute to low recycling rates.<sup>9</sup>

Ultimately, **neither paper nor plastic bags** are the best choice; **choosing reusable canvas bags**

instead is the way to go. From an energy standpoint, according an Australian study, canvas bags are 14 times better than plastic bags and 39 times better than paper bags, assuming that canvas bags get a good workout and are used 500 times during their life cycle.<sup>10</sup>

### How to Recycle Plastic Bags in 5 Steps

- 1 Find out if your local curbside recycling program will accept plastic grocery bags.
- 2 Drop off plastic grocery bags Type 2 and Type 4 at your local grocery store if you are unable to recycle them via your curbside program. Many grocery stores accept plastic bags and have recycling bins inside the store.
  - To find recycling centers for plastic bags near your area, such as supermarkets, go to <http://earth911.com/> and type in “plastic bags” in the “**Find Recycling Centers for**” search box and enter your city.
- 3 Do not recycle any plastic bags that are dark in color or plastic bags with drawstrings. Plastic food packaging and plastic food wrap (Saran wrap) are also non-recyclable
- 4 Prior to recycling, clean and dry bags thoroughly, and make sure they are empty of any debris. This is important, since foreign objects will contaminate the plastic as it is being recycled.
- 5 Check with your county department of public works to find out about local curbside recycling programs and community drop-off centers, or look under "Recycling" in the Yellow Pages



## Part II: The Organic Shopping Experience: The Low-Down on Organic

When you have the option, opt for organic. Organic products are good for you and good for the planet. You can be a steward to the environment by purchasing organic food, for organic methods eliminate the use of persistent pesticides, fungicides, herbicides and artificial fertilizers, in addition to supporting “biodiversity, water quality and energy conservation.”<sup>11</sup>

### United States Department of Agriculture: What the Consumer Needs to Know About Organic Products

Quoted from the United States Department of Agriculture’s background on what constitutes organic products, available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3004446&acct=nopgeninfo>:

“The Organic Foods Production Act and the

National Organic Program (NOP) assure consumers that the organic agricultural products they purchase are produced, processed, and certified to consistent national organic standards. The requirements of the NOP labeling apply to raw, fresh products and processed products that contain organic agricultural ingredients. Agricultural products that are sold, labeled, or represented as organic must be produced and processed in accordance with the NOP standards. Except for operations whose gross income from organic sales totals \$5,000 or less, farm and processing operations that grow and process organic agricultural products must be certified by USDA-accredited certifying agents. Labeling requirements are based on the percentage of organic ingredients in a product.”

### Agricultural Products Labeled “100 percent organic” and “organic”

“Products labeled as “100 percent organic” must

contain (excluding water and salt) only organically produced ingredients and processing aids.

Products labeled “organic” must consist of at least 95 percent organically produced ingredients (excluding water and salt). Any remaining product ingredients must consist of nonagricultural substances approved on the National List including specific non-organically produced agricultural products that are not commercially available in organic form. Products meeting the requirements for “100 percent organic” and “organic” may display these terms and the percentage of organic content on their principal display panel. The USDA seal and the seal or mark of involved certifying agents may appear on product packages and in advertisements. Agricultural products labeled “100 percent organic” and “organic” cannot be produced using excluded methods, sewage sludge, or ionizing radiation.”

### **Processed Products Labeled “made with organic ingredients**

“Processed products that contain at least 70 percent organic ingredients can use the phrase ‘made with organic ingredients’ and list up to three of the organic ingredients or food groups on the principal display panel. For example, soup made with at least 70 percent organic ingredients and only organic vegetables may be labeled either ‘soup made with organic peas, potatoes, and carrots,’ or ‘soup made with organic vegetables.’ Processed products labeled “made with organic ingredients” cannot be produced using excluded methods, sewage sludge, or ionizing radiation. The

percentage of organic content and the certifying agent seal or mark may be used on the principal display panel. However, the USDA seal cannot be used anywhere on the package.”<sup>12</sup>

### **Why Organic Farming is Beneficial to the Environment**

The foundation of organic farming lies in sustainable practices, maintaining the integrity and health of the soil through crop rotation, and using natural pest control and fertilizer. Such practices are different from factory farming, which is reliant on chemicals and genetic engineering for food growth. Additionally, over-farming and other non-sustainable agriculture practices deplete soil nutrients, something which exacerbates further the need for chemical fertilizers and pesticides. These chemicals are emitted into the air and often leach into rivers, lakes and groundwater, resulting in pollution of your water supply.<sup>13</sup>

Yet organic food is often more expensive. When easing into an organic diet, start small. If you are trying to save some money at the grocery store, and desire to purchase organic items, read the following sections to know which organic products are worth the extra expense. As an alternative to the supermarket, looking for locally grown organic produce by visiting farmers markets is always a great place to start for organic produce (and will be easier to find around summer time).<sup>14</sup> The following sections cover what you need to know about organic produce, dairy, and meat whether you are at the supermarket or the farmer’s market.

## A. Organic Produce: The Shopper's Guide

Not all fruits and vegetables are created equal when it comes to being sprayed with pesticides. Analysts from the Environmental Working Group (EWG), a D.C.-based non-profit organization, developed the Shopper's Guide to Pesticides based on data from nearly 87,000 tests for pesticide residues in produce conducted between 2000 and 2007 and collected by the U.S. Department of Agriculture and the U.S. Food and Drug Administration.<sup>15</sup> This Guide includes the Dirty Dozen list of the most contaminated fruits and vegetables, which they recommend that people should always buy organic.<sup>16</sup>

**To Watch an ABC News video on "The Dirty Dozen"** and to learn about organic foods that are worth the cost, go to: [http://abclocal.go.com/kabc/story?section=news/food\\_coach&id=6833777](http://abclocal.go.com/kabc/story?section=news/food_coach&id=6833777).

### Will Washing and Peeling Help?

The studies that were used to create these lists assumed that people either rinse or peel fresh produce; however, rinsing reduces but does not eliminate pesticides. Although peeling does help, valuable nutrients are often washed down the drain with the skin. The best approach: eat a varied diet, rinse all produce and buy organic when possible.<sup>17</sup>

## The Dirty Dozen and the Clean Fifteen: An Environmental Working Group Study

The following information is quoted from the results of the EWG study:

Peaches and apples each had the biggest amount of pesticides -- nine -- detected on a single sample, followed by strawberries and imported grapes, with eight pesticides found on a single sample. As a group, nectarines had the highest percentage of samples testing positive for pesticides (97.3 percent), followed by peaches (96.7 percent) and apples (94.1 percent). Peaches also had the most pesticides overall, with 53 pesticides found in various combinations on the samples tested, followed by apples with 50 pesticides and strawberries with 38.

Among vegetables, sweet bell peppers, celery, kale, lettuce, and carrots are the biggest pesticide carriers. Sweet bell peppers had the most pesticides on a single sample (11), followed by kale (10), then lettuce and celery (nine). Celery had the highest percentage of samples testing positive for pesticides (94.1 percent), followed by sweet bell peppers (81.5 percent) and carrots (82.3 percent). Celery also had the greatest likelihood of containing multiple pesticides in a single vegetable (79.8 percent of samples), followed by sweet bell peppers (62.2 percent) and kale (53.1 percent). Sweet bell peppers also had the most pesticides overall, with 64 found in various combinations from the samples tested, followed by lettuce with 57 and carrots with 40.<sup>18</sup>



**SHOPPER'S GUIDE TO PESTICIDES**

DIRTY DOZEN		CLEAN 15	
Buy These Organic		Lowest in Pesticides	
WORST	1 Peach	BEST	1 Onion
	2 Apple		2 Avocado
	3 Bell Pepper		3 Sweet Corn
	4 Celery		4 Pineapple
	5 Nectarine		5 Mango
	6 Strawberries		6 Asparagus
	7 Cherries		7 Sweet Peas
	8 Kale		8 Kiwi
	9 Lettuce		9 Cabbage
	10 Grapes (Imported)		10 Eggplant
	11 Carrot		11 Papaya
	12 Pear		12 Watermelon
			13 Broccoli
			14 Tomato
			15 Sweet Potato

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## B. Organic Dairy vs. Non-Organic Dairy: How Do they Match Up?

The United States Department of Agriculture (USDA) has stated that there is no difference between regular milk and organic milk, besides from how the cows are raised and differences in price. However, studies are accumulating which suggest organic milk is indeed better.<sup>19</sup> The USDA defines organic dairy products as those made from the milk of animals that are raised under a certain organic management. Organic cows are raised in herds separated from conventional dairy cows, and the animals cannot be given growth hormones or antibiotics. Organic animals do receive vaccines, dietary supplements, vitamins and minerals as part of preventative medical care.<sup>20</sup>

Dairy cows that are raised organically are required to have access to “pasture, the outdoors, shade, shelter, exercise areas, fresh air, and direct sunlight suitable to their stage of production, the climate, and the environment.” In order to convert cows from conventional to organic production, “the cows must be fed a diet consisting of at least 80 percent organic feed for 9 months and then 100 percent organic feed for 3 additional months, or must be grazed on land that is managed under a certified organic plan.” The processes used to bottle the milk and produce and package the cheese, ice cream, yogurt, and other dairy products must also

be certified. Organic and non-organic products must be separated to prevent the organic products from coming into contact with prohibited substances. Yet when there is no organic

equivalent, non-organically produced ingredients may be used when processing an organic product; in addition, “volatile synthetic solvents and other synthetic processing aids are prohibited.”<sup>21</sup>

### Why Choose Organic Milk?

Paediatrician Dr. Alan Greene, whose new book *Raising Baby Green* focuses on raising a child in an environmentally-friendly way, states, “When you choose a glass of conventional milk, you are buying into a whole chemical system of agriculture,” says Dr. Greene. “People who switch to organic milk typically do so because they are concerned about the antibiotics, artificial hormones and pesticides used in the commercial dairy industry. One recent United States Department of Agriculture survey found certain pesticides in about 30 percent of conventional milk samples and low levels in only one organic sample. The level is relatively low compared to some other foods, but many kids consume milk in large quantities.”<sup>22</sup>

Adapted from WebMD’s page on organic milk, available at <http://blogs.webmd.com/health-ehome/2009/02/organic-milk-does-body-better.html>:

Organic milk has fewer pesticide residues. The USDA Pesticide Data Program (PDP) regularly checks food for pesticide residues. For many years the milk studies showed the same level of pesticide residues in both regular and organic milk (some residues of banned pesticides are so persistent that they are still found in water and soil, and thus affect the entire food chain). In 2004, the PDP used more sensitive testing equipment and found synthetic pyrethroids in 24 percent of the conventional samples, and none of organic sample. They also discovered a breakdown product of the insecticide carbofuran in 8.8

percent of the conventional milk samples, but in no organic sample.

**Organic milk has more vitamins.** Organically reared cows, which eat high levels of fresh grass, clover pasture and grass clover silage, produce milk which is on average 50% higher in Vitamin E (alpha tocopherol) and 75% higher in beta carotene (which our bodies convert to Vitamin A).

**Organic milk has more antioxidants.** Studies show organic milk has two to three times more of the antioxidants lutein and zeaxanthine than non-organic milk. These antioxidants are extremely important for eye health and are effective in preventing numerous eye diseases.

**Organic milk has more Omega-3s.** Omega-3 is an essential fatty acid required for healthy growth. Regular intake of Omega-3 helps reduce incidences of heart disease, inflammations (in skin diseases such as eczema), cancer, arthritis, etc. One particular type of omega-3 that is higher in organic milk is DHA, which is important for brain development.

**Organic milk has more CLA.** Cows that are grazed on pastures have 500% more CLA in their milk. Conjugated linoleic acid (CLA) increases metabolism, immunity, and muscle growth. It also reduces abdominal fat, cholesterol, and allergic reactions. Recent animal studies have also shown that CLA may be beneficial in cancer treatment. Since the human body cannot produce CLA, we get most of it through the milk and dairy products that we consume.

**Drinking organic milk helps improve the**

**quality of breast milk.** European scientists have found that mothers who consumed mostly organic meat and milk had around 50 percent higher levels of rumenic acid in their breast milk. This acid protects against cancer and inflammatory diseases such as arthritis, heart disease and asthma.

**Drinking organic milk protects young children against asthma and eczema.** Researchers found that children of breastfeeding mothers who ate organic dairy products and who were weaned on organic milk, cheese and yogurts were a third less likely to suffer from allergies. Dr. Machteld Huber, one of the authors of the study published in the British Journal of Nutrition, said: "The difference was significant, but only for children exclusively eating organic dairy products. We didn't find a relationship if they had organic and conventional dairy products." Almost all the children eating organic dairy also reportedly ate organic meat, fruit, bread and vegetables. However, it was only milk that appeared to have any impact on allergies.

The cow's diet is a leading factor in the healthiness of organic milk. Organic cows are mostly pasture-fed in contrast to grain-fed, and this natural diet leads to a quality milk superior to non-organic milk.<sup>23</sup>

**To see how your organic milk brand lines up with other brands, please go to <http://www.cornucopia.org/dairysurvey/index.html>.**

### **Taste Test**

A taste test with organic versus non-organic milk by *The Portland Tribune* discovered a unanimous result: the 2 percent or nonfat milk, organic

varieties both had a noticeably sweeter, creamier taste, and a similar comparison produced wins for organic ice cream and yogurt.<sup>24</sup>

### Cost Comparison

Currently, organic milk costs more than “regular” milk – sometimes up to \$2 - \$3 more per gallon. This price will likely come down as more people switch to organic dairy products and organic farmers can achieve economies of scale.”<sup>25</sup>

### C. Organic Meat: Information on Being a “Conscientious Carnivore”

A 2006 report by the Food and Agriculture Organization (FAO) states that livestock production is one of the major causes of the world's most pressing environmental problems, including global warming, land degradation, air and water pollution, and loss of biodiversity. “Using a methodology that considers the entire commodity chain, it estimates that livestock are responsible for 18 percent of greenhouse gas emissions,” which is a larger portion than that of transport.<sup>26</sup>

Eating fewer animal products is the best option with regard to the environment; however, if you choose to eat animal products, choosing organic meat products can make a significant impact on your health and the environment. There are two means by which you can purchase organic meat. First, by purchasing products from local, sustainable and organic farms in your community, you help support the larger community as well. Eating products from such farms are a healthy choice for your family.<sup>27</sup> Second, supermarkets and natural food stores regularly carry certified organic

poultry, beef and lamb, as well sausages, burgers and deli products.<sup>28</sup>

But what is a conscientious carnivore? Conscientious carnivores eat less meat and more fruits, vegetables and whole grains. When they choose meat, they want premium quality. Organic beef, pork and poultry are ideal, combining outstanding taste with the added assurance of organic certification. Organic farmers work in harmony with nature using sustainable practices and the latest scientific advancements to “break the harmful cycle of chemical dependence perpetuated by conventional agriculture and food production for the past 50 years.” Unlike organic farming, conventional agriculture goes against the grains of nature with practices that accelerate the growth of livestock with antibiotic-laced feed and synthetic hormones.<sup>29</sup>

### What Constitutes Organic Meat?

Organic meat is beef, pork or poultry that has been raised and processed according to strict USDA Organic guidelines. All certified organic meat is independently inspected and traced at every phase of the production—from the farm to the supermarket—to ensure compliance with the USDA National Organic Standards. These include:

- 100% Certified Organic Feed: Organic livestock are fed only 100% certified organic feed or grass grown without toxic and persistent pesticides or fertilizers that are harmful to our environment.
- No Animal Byproducts: USDA Organic regulations forbid animal byproducts of any form in livestock feed, a practice linked to

Mad Cow Disease in beef.

- **Humane Treatment:** Organic rules promote the humane treatment of livestock and are based on the natural behaviors of the animals. These include un-crowded living conditions, and access to the outdoors.
- **No Antibiotics:** The use of antibiotics in feed is strictly forbidden. This practice is common in conventional agriculture where it's used to accelerate livestock growth and prevent the diseases common in confined living quarters. Studies have shown that the overuse of antibiotics in livestock has resulted in an increase of antibiotic-resistant bacteria, a serious threat to human health.
- **Preventative Health Practices:** Organic livestock are raised using natural health practices designed to prevent disease. The use of antibiotic-laced feed or synthetic growth hormones is strictly prohibited. If antibiotics are needed to treat an animal, it is no longer certified organic.
- **Natural Processing Methods:** Organic processing rules forbid the use of synthetic chemicals, artificial preservatives or harmful additives such as sodium nitrite.”<sup>30</sup>

## **Other Requirements of Organic Meat Production:**

### **Inspection of Feed Mills**

To produce livestock feed that is organic, feed mills must be inspected and certified. If the feed mills produce organic and non-organic feed, “they must implement procedures, documented with written records, to prevent the commingling of organic and non-organic feed.” Feed mills certified

as organic must prevent the contamination of organic feed with “antibiotics, hormones, slaughter by-products, and insecticides which may be added to non-organic rations.”<sup>31</sup>

### **Inspection of Slaughter Facilities**

“Organic beef must be slaughtered in slaughterhouses that are certified organic. As such, slaughterhouses must slaughter organic animals when all equipment is clean and empty. There must be no chance of commingling organic with non-organic meat, or contaminating organic meat with prohibited materials. Records must be maintained of all organic slaughter activities and steps taken to protect organic integrity. If a plant can prove that it can segregate organic animals and meat products and take all steps necessary to protect organic integrity, then it can be certified. However, it does not have to be dedicated to slaughtering only organic animals.”<sup>32</sup>

## 10 Reasons Why You Should Purchase Organic Meat:

- 1 Free of antibiotics, added hormones, GMO (genetically modified organisms) feed and other drugs; no GMO animals. Organically raised animals are not fed antibiotics, genetically modified foods, bovine human growth hormones (rbGH), or other artificial drugs. Certified organic animal products cannot have their genes modified (for example, a scorpion gene cannot be spliced into a cow gene).

**How:** Organically raised animals are raised in a healthier environment, fed organic feed and eat a wider range of nutrients than animals raised in factory farms (such would be the case of free-range chickens and ranch cattle). The animals do not originate from a test tube.

**Highlights:** Organically raised animals have been shown to be significantly healthier than factory-raised animals.

- 2 **Mad cow safeguard: Animals aren't forced to be cannibals.** Feeding cattle ground up remains of their own species appears to cause bovine spongiform encephalopathy (BSE), a horrific disease that destroys the central nervous system and brain, which can be transmitted to humans eating the infected cows. The disease in humans has a very long latency period, and is called Creutzfeld-Jakob disease.

**How:** Animals are fed 100 percent organic feed without ground up animal parts.

**Highlights:** By eating 100 percent organic meat you are protected by a label insuring the cow has only been fed 100 percent organic feed.

The Federal Drug Administration (FDA) banned the feeding of cattle brain and spinal tissue to cattle in 1997, and the FDA has publicly stated that they will ban blood, poultry litter, and human food wastes, but they still allow the following materials to be fed to non-organic cattle:

- Gelatin (rendered from the hooves of cattle and other species)
- Fats, oils, grease, and tallow (from cattle and other species)
- Poultry and poultry by-products
- Rendered pork protein

However, none of the items in the above list are allowed to be fed to organic cattle or other organic livestock.<sup>33</sup>

- 3 **More humane, ethical treatment of animals.** Factory farms keep the animals in tightly confined pens.

**How:** Buy meat and eggs raised from chickens raised outdoors with free ranging and grazing.

**Highlights:** Animals are more likely to be raised without cruelty.

- 4 **Animals free-range and graze.** When you see the words “free-range,” and “ranch raised,” these are clues that the animals were raised in a more humane way, with a well-rounded diet. Such animals are not confined and spend time outdoors in the fresh air.

**How:** Free range chickens eat more “grubs and bugs than their industrially-raised counterparts”; free range animals graze as they are inclined.

**Highlights:** Humane and ethical treatment of animals; more nutritious food.

**5 Manure: small farms use it, industrial farms pollute with it.**

**How:** On farms that are small and diverse, manure is used as natural fertilizer for the soil. Yet industrial farms produce manure on such a larger scale that it poses a human health risk. The overspill of manure can contaminate wells with E. coli and other pathogens. In one region of North Carolina, for example, hog farms produce 10 million metric tons of waste annually.

**Highlights:** Sustainable farms use their manure productively as organic fertilizer. The manure is “pure,” coming from animals fed with organic diets.

**6 Animals are integral to small farms. “Using animal manure is considered recycling of nutrients. No farm can cope with all the animal offspring, so selling some makes economic sense. Sustainable farms tend to provide and sell a range of products, and organic eggs and animal products would be included.”**

**How:** Most organic farms have a few cows, chickens, etc.

**Highlights:** The animals—many of diverse gene pools—serve other purposes besides providing food.

**7 Fewer chemicals used.** No synthetic pesticides and fertilizers are used on the food or land. Such residues of persistent chemicals (such as DDT, PCBs, dioxin, and many pesticides) normally bioaccumulate in animals, concentrating in their fat. Eating organic animal fat reduces your exposure to these chemicals. Also, organic farmers are exposed to fewer chemicals.

**How:** Organic agriculture works with the environment, aiming for a healthy balance of the soil, using crop rotations and other techniques that improve soil fertility. The animals are not fed food that contains pesticides, and the amount of persistent pesticides in their fat is lowered.

**Highlights:** Safeguards groundwater, farmers’ health, topsoil, habitats, and neighborhood well-being.

**8 Diversity.** Industrial farms rely on just a few species of cattle, chickens, pigs, etc., whereas small sustainable farms tend to raise a wider variety of livestock. Entire species of livestock can die out if they are not sustained on farms.

**How:** You can support the U.S. food supply through the purchasing of food that represents a wide gene pool. When you buy brown versus white eggs, you are supporting diversity.

**Highlights:** Support diversity by supporting the diversity of your local farms. Buy their milk, eggs, and meat.

**9 Factory farms use huge amounts of resources.** The factory farm industry is run with cheap, non-renewable fossil fuel, on which production, transport, processing, and marketing rely heavily upon. Without cheap fuel, industrial agriculture would be impossible because it would be too expensive, notes organic farming expert Fred Kirschenmann. The heavy pesticide use on industrial farms contaminates groundwater and soil. Kirschenmann believes industrial farms are responsible for the loss of over half of U.S. topsoil.

**How:** Organic farms uses less energy with careful ecological management, and utilize natural ecological balances to solve pest problems. Buying animal products from local farms further reduces energy consumption by reducing the amount of miles the food travels to your table.

**Highlights:** Organic farms use 70 percent less energy than industrial farms, and since they don't use pesticides they help preserve ground water. The farming techniques of organic farms build topsoil and do not contribute to its erosion.

**10 Your dollars support the farm you buy from.** If you buy your meat from an organic farmstand at a farmer's market you support that farm. On the other hand, if you buy non-organic meat that isn't local, free-range, or ranch-raised from a supermarket chain, you most likely support a multinational food conglomerate.

**How:** You can contribute to the well-being of your community by supporting small, local, diverse organic farms.

**Highlights:** Buying organic animal products is better for your health, your local community, and the larger community as a whole.<sup>34</sup>



## Part III:

### Seafood Sustainability 101

#### What is Sustainable Seafood?

“Sustainable seafood comes from a fishery with practices that can be maintained indefinitely without reducing the target species’ ability to maintain its population and without adversely affecting other species in the ecosystem by removing their food source, incidentally killing them or damaging their environment. The world’s oceans are in a state of crisis. Destructive fishing and aquaculture practices are recognized as a major threat to the global marine environment alongside global warming. United Nations Food and Agriculture Organization (FAO) statistics show that three-quarters of commercially valuable fish stocks are fully exploited, overexploited or depleted. Worldwide, up to 90 percent of stocks of large predatory fish have already been lost and scientists predict that, if current trends continue, the world’s commercial fisheries could collapse within the next 40 years. While this paints a dire

picture of the future, it is clear that together we have the tools to turn things around, but we must act quickly.”<sup>35</sup>

The creation of the Marine Stewardship Council (MSC) in 1997 was the result of the efforts of two global organizations, WWF and Unilever, wanting to tackle the issue of seafood sustainability. Together they founded the MSC as a means to:

- Recognize and reward good fishery management
- Work with fishery and commercial partners to build a market for sustainable seafood
- Provide an easy way for buyers and consumers to identify sustainably caught seafood.

Both the seafood industry leaders and retailers have welcomed the MSC standard establishment and started taking part: currently, over 100 fisheries have voluntarily entered the MSC certified sustainable seafood program and

shoppers around the world are buying seafood with the MSC label. The MSC states, “by buying MSC certified and labeled products you are rewarding well managed and sustainable fisheries, safeguarding our seafood for today and for future generations, and helping to grow a market that will encourage others to get involved in the MSC program.”<sup>36</sup>

MSC fisheries certification is open to all wild capture fisheries, despite their size, type or location. The MSC program does not include farmed fish, which is why their eco-label is only displayed on wild caught fish. Fisheries certified under the MSC program have gone to great lengths to show that they meet the MSC environmental standard for sustainable fishing. The standard is based on three core principles:

1. Sustainability of exploited fish stocks
2. Maintenance of the ecosystem on which the fishery depends
3. Effective and responsible management

“To become MSC certified, fisheries voluntarily agree to undergo an independent, third-party assessment by an accredited certifier and team of independent experts, who might make multiple visits to the fishery depending on its size and complexity. The team gathers and analyses the best scientific data, and makes it available to anyone who registers an interest (such as government agencies, conservation groups and scientists). At the end of the consultation process, the team recommends whether or not the fishery meets the three core principles of the MSC standard and a report is published on this website for anyone to read and even object to before the team issues a

final assessment and report on the fishery. If the certifier confirms that the fishery meets the MSC environmental standard for sustainable fishing then that fishery can apply to use the MSC label on its products.”<sup>37</sup>

## Why It Is Important to Purchase MSC Fish:

### Knowing where your seafood comes from

When you buy seafood that carries the MSC logo, every company that has handled the product, from the fishery to the retailer or restaurant, has been independently audited to ensure it only uses the MSC label on certified sustainable seafood, stores MSC certified products separately, and keeps effective records of MSC certified products.

### Look for the Eco-label

People often ask 'Is tuna environmentally friendly', or 'Is it OK to eat salmon?' The MSC advice is not to base your shopping decision on the type of fish, for example some cod fisheries are well-managed and others are not. If you want to be certain that you are buying sustainable fish, the MSC label is the simplest way to ascertain yourself that it comes from a fishery that has been independently certified as sustainable against the most robust standard.

To inform yourself about sustainable fish for eating, please go to <http://www.msc.org/cook-eat-enjoy/fish-to-eat>.

According to a USA Today/Gallup Poll conducted in March 2007, more than 8 in 10 Americans said a company’s environmental record should be an important factor in deciding whether to buy products.

Greenpeace created a **Red List** of seafood, which are fish that come from fisheries or farming practices that are “clearly the most damaging and in need of immediate attention.”

**Red List species, Listed by Highest Priority**

- 1) **Atlantic Halibut**
- 2) **Bluefin Tuna**
- 3) **Chilean Sea Bass**
- 4) **Hoki**
- 5) **Orange Roughy**
- 6) **Sharks**
- 7) **Alaska Pollock,**
- 8) **Atlantic Codor Scrod,**
- 9) **Atlantic Salmon**
- 10) **Atlantic Sea Scallop**
- 11) **Greenland Halibut**
- 12) **Grouper**
- 13) **Monkfish**
- 14) **Ocean Quahog**
- 15) **Red Snapper**
- 16) **Redfish**(Ocean Perch)
- 17) **Skates and Rays**
- 18) **Swordfish**
- 19) **Tropical Shrimp**(farmed and wild)
- 21) **Tuna – Bigeye**
- 22) **Tuna – Yellowfin**<sup>38</sup>

**To find out more the Red List profiles, please go to Appendix B:**

<http://www.greenpeace.org/raw/content/usa/press-center/reports4/carting-away-the-oceans.pdf>.

**For a pocket guide of what fish are sustainable to eat in the Northeast region of the United States go to:**

[http://www.montereybayaquarium.org/cr/cr\\_seafoodwatch/content/media/MBA\\_SeafoodWatch\\_NortheastGuide.pdf](http://www.montereybayaquarium.org/cr/cr_seafoodwatch/content/media/MBA_SeafoodWatch_NortheastGuide.pdf)

## **What Supermarkets Are Doing**

Supermarkets are introducing new standards for the farmed fish and shrimp that make up around half of U.S. seafood consumption, which feeds the consumer demand for environmentally friendly products. In July 2006, Whole Foods announced the first comprehensive set of aquaculture guidelines by a major retailer. Wal-Mart has established standards for farmed shrimp and certified its factories with the Aquaculture Certification Council. And Wegmans worked with Environmental Defense Fund on farmed-shrimp policy to ban antibiotics, avoid damaging sensitive habitats, treat waste water and reduce the use of wild fish to feed shrimp.

Supermarkets increasingly rely on the \$70 billion worldwide aquaculture industry to help meet demand as the supply of wild-caught fish remains limited. Although the non-profit Marine Stewardship Council provides certification for suppliers of wild-caught seafood -- the labels are used in stores from Whole Foods to Wal-Mart -- there is no widely accepted standard for sustainable farming practices.

Whole Foods said it decided to develop its own comprehensive plan two years ago, and it began consulting with environmental groups and scientists and visiting its suppliers' farms. The company said it may modify its guidelines as consensus is reached among advocacy organizations.



The new policies would apply to all frozen, fresh, canned and smoked seafood, except mollusks. They include prohibitions on preservatives, antibiotics, hormones and other chemicals that can be harmful to humans but are typically used to stave off sickness and encourage growth in fish. Whole Foods plans to ban farms in wetlands and mangroves, and limit how much wild fish can be used to feed farmed fish.

Greenpeace ranked major grocers according to whether they had a sustainability policy for seafood, the types of fish sold, training and labeling. The rankings covered both farmed and wild seafood. Whole Foods came in first, even though its score was just 4 out of 10. John Hocevar, Greenpeace oceans campaign director, said the report was released before Whole Foods' new standards were finalized, and he expects the company's score to increase. Giant parent company Royal Ahold ranked second, followed by Harris Teeter, Wegmans and Wal-Mart (please see image below for complete ranking).<sup>39</sup>

**Top Supermarkets Selling Sustainable Fish in Maryland:**

My Organic Market (MOM's)

Whole Foods Market

Martin's

Giant

Super Target

Harris Teeter

Sam's Club

Wal-Mart

Safeway

Wegmans

**To see the full list for Maryland or another state, go to:**

<http://www.greenpeace.org/usa/campaigns/oceans/seafood>

## Retail Seafood Sustainability

# SCORECARD

Rank	Retailer	Rating (max 10)*	Seafood Sourcing Policy (max 100)	Support for Initiatives (max 100)	Labeling & Transparency (max 100)	Number of Red List Species on Sale (max 22)	Seafood Sustainability Score (max 100)
1	Whole Foods Market	4	27.5	37.5	35	16	36.5
2	Ahold USA	4	40	27.5	40	15	35.9
3	Harris Teeter	4	30	35	42.5	14	35.9
4	Wegmans	3	0	42.5	27.5	13	28
5	Wal-Mart	3	15	42.5	12.5	14	27.1
6	Target	3	15	15	15	10	25.3
7	Safeway	2	0	20	15	15	19.8
8	Aldi	2	0	0	0	5	19.5
9	Kroger	2	0	15	30	15	19.3
10	Costco	2	0	19	20	15	18.8
11	Giant Eagle	1	0	10	10	14	14.5
12	Winn-Dixie	1	0	0	0	11	13.5
13	A&P	1	0	10	10	17	11.5
14	Delhaize	1	0	5	5	15	11.5
15	Supervalu	1	0	10	15	18	11.3
16	Trader Joe's	1	0	0	5	14	11.3
17	Meijer	1	0	0	0	13	11
18	H.E. Butt	1	0	0	0	15	8.5
19	Price Chopper	1	0	0	0	16	7.5
20	Publix	1	0	10	10	21	6

RATING KEY: ■ Good ■ Pass ■ Fail

\*companies can score up to 10

## What Consumers Can Do

The world's oceans can be saved. You can help!

**1. Don't buy Red List seafood.** Help Red List species recover by refusing to buy these species, and encouraging your local supermarket to do the same.

**2. Ask questions.** Next time you're in the grocery store, ask the seafood counter or store manager about the type of seafood offered and how it was caught or farmed. If they don't know, ask them to find out for you so you can make sustainable choices.

**3. Check labels.** Although current labeling practices make it difficult for consumers to make sustainable choices, and rarely provide the species name, the precise area of catch, or the fishing or farming method used, some retailers provide this information on the label.

**4. Join together with Greenpeace and other consumers to protect the world's oceans.** Learn more and get involved to protect the world's oceans at: [www.greenpeace.org](http://www.greenpeace.org).

As a consumer, you can help support seafood sustainability. Use the tools in this report to inform yourself, your friends and family, and your local supermarket about the need for sustainable seafood.



## Part IV: Online Grocery Shopping

Shopping for your groceries online is not only done in the comfort of your own home, but it eliminates the need to drive to and from the grocery store and can save you valuable time. A significant amount of energy is used up for grocery shopping. Once a week or more, consumers spend gas by driving to and from the big box grocery store, fraught with huge coolers and freezers using ample amounts of energy. Now think of the millions of people who are doing the same thing, which wastes a substantial amount of time and energy.

Thus, online grocery shopping is quite appealing: you can browse through a tremendous selection of products, add them to your virtual shopping cart, and schedule a delivery time which is usually a day in advance—all with a minimal delivery fee. Here are some reasons why online grocery shopping is a plus:

1. Home delivered produce is superior. When

you place your online delivery order, it is typically filled in the morning from produce that has not yet been put on store shelves, which means better quality than in-person shopping.

2. **You'll get the freshest of everything else.** Just like with your fruits and veggies, your other perishables will be picked from the highest quality.
3. **Packers and drivers don't have time to damage your goods.** The whole packing and delivery process is closely scrutinized and randomly inspected.
4. **Delivery times are flexible and precise.** Most home deliverers offer small delivery windows of two or four hours, and you can request a certain window of time to have your groceries delivered.<sup>40</sup>

## Additional Reasons to Buy Groceries Online

- **Sort by price.** With online grocery shopping, you can sort items by price to see which ones are the least expensive.
- **Reusable shopping history.** If you typically buy the same items every week, many online grocery websites will keep your shopping history and remember these items and add them to your new list.
- **Special online-only promotions.** To draw and keep more customers, stores often offer discounts on their internet storefronts that you won't find in stores. Coupon codes for percents- or dollars-off your entire order are also common.
- **The whole process takes about half the time of regular grocery shopping.** By grocery shopping online, you cut out the need of driving to and from the store (and the costs of gas and emitting greenhouse gases into the atmosphere!), walking through the aisles, checking out, and loading and unloading your car. This way, with online grocery shopping, you can donate your time to other endeavors.<sup>41</sup>

## A few downsides of online grocery shopping

- Occasional missing/damaged items. It is possible that once in a while an item delivered to your door may be damaged. If you catch the damaged good while the delivery driver is still there, return it on the spot and your credit card will be credited for the cost of the item. For missing items, it is best to catch the missing

item while the driver is still there—otherwise, customer service is there to help your issues/complaints.

- **Minimum orders required.** Most online grocers require an order that is more than 50 dollars worth of items. At some internet grocery stores, you can purchase \$50+ and bring the total below \$50 with coupon codes and they'll still deliver your order.<sup>42</sup>

**Where to Grocery Shop Online** (place your cursor on the bolded term to see the link to each website):

- **Peapod** works with Giant and Stop & Shop to serve the Chicago, Boston/Cape Cod, Milwaukee, Southern Connecticut, Long Island, Baltimore, and Washington DC metropolitan areas as well as other areas in New Jersey and Rhode Island.
- **Safeway.com** has online groceries in California, Arizona, Maryland, Oregon, Virginia, Washington, and Washington DC.
- **Vons.com** has an online grocery shopping service available in Southern California (Los Angeles, San Diego) and Las Vegas.
- **Genuardis.com** does grocery delivery in the Philadelphia and Washington DC metro areas.
- **Hy-vee** has an online groceries service in Des Moines.
- **Freshdirect.com** has an excellent grocery delivery service in the New York City metropolitan area.
- **Groceries-express.com** serves Detroit.
- **Coborn's** has a new service providing groceries online to the Minneapolis-St. Paul and St. Cloud, Minnesota metropolitan areas.

- 
- **Netgrocer.com** has an interesting model—they serve the entire US and will send you groceries via Fedex. They have mostly non-perishable products as well as some meats and dairy products, but no produce.
  - **Wegoshop.com** is also interesting, in that it works with independent local associates to provide grocery delivery to their communities. The only way to know if you qualify is to look your location up on their website to see if any associate is available there.<sup>43</sup>



# Part V:

## Local Farming and Local Buying--What You Need to Know

### A. Why Go Local?

For products grown in the United States, most produce is picked 4 to 7 days prior to being placed on supermarket shelves, while being shipped an average of 1500 miles before being sold. These processes are affordable due to the “artificially low energy prices,” and small farmers are hurt by the U.S. subsidies of large scale, agribusiness-oriented agriculture using this cheap, unsustainable method. These methods are also destroying soil and water while “concentrating wealth and power into a few hands.”<sup>44</sup>

Oil will not be cheap forever—world oil production has seen its peak and estimates state that supply will start to dwindle and cause energy prices to rise. In order to counteract such unsustainable practices, it is imperative to buy locally grown food when possible. Not only will you be helping the environment, but you will also

strengthen your local community by feeding the local economy. Only 18 cents of every dollar, when buying at a large supermarket, go to the grower. 82 cents go to various unnecessary middlemen. Buying food directly from your local farmer will cut the middlemen out of the picture.<sup>45</sup>

### Become a Locavore

Locavores are individuals who are attentive to where their food comes from and try and eat local food when possible. The first step is to define what “local” means for you. Some people start by eating within a 100-mile radius of their homes, or they try and eat within an area like their state or region.

## 10 Ways to Become a Locavore

- 1 Visit a farmers' market.** Purchasing items from a farmers' market keeps small farms thriving through direct sales. The farmer is able to take home nearly all of the money you hand him, which eliminates the middleman. To find a farmer's market in your state, go to: <http://apps.ams.usda.gov/FarmersMarkets/>.
- 2 Lobby your supermarket.** You can ask your supermarket manager about the origins of your meat, produce and dairy. Your show of interest is crucial to help the supermarket change its purchasing practices.
- 3 Choose 5 foods in your house that you can buy locally.** Start small: pick 5 foods that you can start with by buying them locally for your home.
- 4 Find a local CSA and sign-up!** By investing in a local farm through a CSA—Community Supported Agriculture—program, you receive a weekly box of assorted vegetables and other farm products in exchange. Most CSA programs provide a discount if you pre-pay for your share on a quarterly or yearly basis because a pre-payment allows the farm to use the cash in the springtime when money is needed for farm equipment or investment in the farm. CSA programs take the work out of buying local food, as the farmer does the worrying for you. **To learn more about CSA, please see the next section.**
- 5 Preserve local food for the winter.** Try your hand at making [applesauce](#), [apple butter](#) and [quince paste](#). To learn about safe preserving techniques, go to the [National Center for Home Food Preservation](http://www.uga.edu/nchfp/) (<http://www.uga.edu/nchfp/>).
- 6 Find out what restaurants in your area support local farmers.** To do so, you can ask the restaurants where they are receiving their ingredients from directly, or you can ask the farmers at the farmers' market what restaurant accounts they hold.
- 7 Host a local Thanksgiving.** You can participate in the 100-mile Thanksgiving project (<http://100milediet.org/thanksgiving>) and make a dish or an entire meal from locally-produced foods.
- 8 Buy from local vendors.** Many areas locally produce jams, jellies, and breads—in addition to locally produced coffee and confections. Although such businesses may not use only local ingredients, you **are still supporting the local economy.**

- 9 **Ask about origins.** If you are a really active locavore, you can call the producer of your favorite food products to find out where the ingredients come from. By doing so, a message is being sent to the companies that consumers are demanding to know the origin of their foods' ingredients.
- 10 **Visit a farm.** Locate a farm in your area and call to make an appointment to see the farm. When time allows, the farmers are usually happy to show a family or a group around the farm. When you visit, ask the farmers what challenges they have had and why they choose to grow what they are growing. Be sure to take the kids along on this journey! Children need to know where their food is coming from in order to feel a sense of connection to their dinner.<sup>46</sup>

## B. Community Supported Agriculture (CSA)

Community Supported Agriculture (CSA) is comprised of a community of individuals pledging to support farm operations—thus the farmland becomes “either legally or spiritually, the community's farm,” as the growers and consumers provide support and share both the benefits and risks of food production.<sup>47</sup> A farmer or grower, usually with the assistance of a core group, creates a budget reflecting the costs of production for the year—including all salaries, distribution costs, investments for seeds and tools, land payments, taxes, machinery maintenance, etc. The budget is then divided by the number of people the farm will provide for, determining the cost of each share of the harvest. The equivalent of one share is usually comparable to the weekly vegetable needs for a family of four. Share prices reflect many variables and range between \$300 and \$600.<sup>48</sup>

Community members sign up and purchase their shares prior to the seeds being sown and they pay in a lump sum, or another option is in several

instalments through-out the growing season. Production expenses are thus guaranteed and the farmer or grower receives income as soon as work begins. In return for their investment, CSA members receive a bag of fresh, locally-grown, typically organic produce once a week from late spring through early fall, and occasionally throughout the winter in northern climates and year-round in milder zones. Members prefer a wide variety of vegetables and herbs, thereby encouraging integrated cropping and companion planting. These farming practices help reduce risk factors and give multiple benefits to the soil. Crops are planted in succession in order to provide a continuous weekly supply of mixed vegetables. As crops rotate throughout the season, weekly shares vary by size and types of produce, reflecting local growing seasons and conditions.<sup>49</sup>

CSA, over the past 20 years, has become a very popular means for consumers to buy local, seasonal food directly from the farmer. The basics are as follows: a farmer offers a certain number of “shares” to the public, which consists of a box of

vegetables or other farm products. Consumers interested can buy a share (a "membership" or "subscription") and in exchange receive a box (bag, basket) of seasonal produce each week throughout the farming season.<sup>50</sup>

### Advantages for farmers

- Receive payment early in the season, contributing and helping the farm's cash flow
- Create relationships with the people who consume the food they grow

### Advantages for consumers

- Eat ultra-fresh, flavorful, and vitamin-enriched food
- Exposure to new vegetables and new ways of cooking
- Visits to the farm at least once a season
- Develop a relationship with the farmer who grows their food and become more educated about how food is grown<sup>51</sup>

### Other advantages

- CSA keep food dollars in the local community and contribute to the development and maintenance of regional food systems.
- With a "guaranteed market" for their produce, farmers can invest their time in doing the best job they can producing food rather than marketing their products.
- CSA support the biodiversity of a given farm and the diversity of agriculture.
- CSA create a sense of social responsibility and stewardship of local land.

- CSA put "the farmers face on food" and increased understanding of how, where, and by whom our food is grown.<sup>52</sup>

Tens of thousands of families have joined CSAs. Since the government does not track CSAs, no official count exists of how many CSAs there are in the United States. LocalHarvest.org has the most comprehensive directory of CSA farms, with over 2,500 listed in the grassroots database.<sup>53</sup>

CSAs are not confined to produce, however. The options often exist for shareholders to buy shares of eggs, homemade bread, meat, cheese, fruit, flowers or other farm products along with their veggies. It is not uncommon for several farmers to offer their products together, in order to provide the widest variety to their members. Other farmers have created standalone CSAs for meat, flowers, eggs, and preserved farm products. In some parts of the country, non-farming third parties are setting up CSA-like businesses, where they act as middlemen and sell boxes of local (and sometimes non-local) food to their members.<sup>54</sup>

## C. Local vs. Organic Foods

According to a 2007 TIME Magazine article, food purists now deem "local" as the new "organic". Chefs, food writers and the politically minded alike have been "outraged that 'Big Organic' firms now use the same industrial-size farming and long-distance-shipping methods as conventional agribusiness." Not all locally grown foods are organic, however. In central California, for example, one of the "few not-too-



warm regions,” it is possible to find an abundance of organic produce that is also grown locally. But in humid climates, “the moisture that encourages bacteria and fungi means that growing without pesticides is much more risky, expensive and rare.” Although farmers’ markets feature organic produce from nearby farms, farmers’ markets may not be easily accessible by everyone and not all products at the markets are organic.<sup>55</sup>

Recent studies suggest that organic foods contain higher levels of vitamins than their conventionally grown counterparts, however, advocates of local eating are now “making another leap, saying what happens after harvest—how food is shipped and handled—is perhaps even more important than how it was grown.” Locavores.com a site popular among local purists, asserts that “because locally grown produce is freshest, it is more nutritionally complete.”<sup>56</sup> Thus eating locally is still very important, and despite the fact that it may not be organic, you are still helping the environment through decreased greenhouse gas emissions—cutting down the traveling time of the produce—and you are supporting your local community.



## Part VI: Food Composting Options at Home

### Composting at Home: Good for your garden and the environment

An easy way to grow a healthy, sustainable garden is by composting yard waste and kitchen scraps. Also, when waste is sent to the landfill, air cannot get to this organic waste. As the waste breaks down it emits methane, a potent greenhouse gas, which contributes to global climate change. However, when this same waste is composted above ground at home, oxygen helps the waste to decompose aerobically which means no methane is produced, something which is good for the planet (and your garden, too!).<sup>57</sup>

Having compost in your garden helps recycle nutrients and organic matter, growing “trouble-free plants with less water, fertilizer or pesticides.” Compost also helps to build healthy soil, which absorbs and filters runoff, thereby protecting streams from both erosion and pollution. Home

composting saves you time and money, for you will no longer need to “bag and drag” heavy yard waste to the curb for collection or pay to have it trucked to composting facilities. By composting your food scraps as well, this keeps them out of costly landfills and reduces your garbage bills.<sup>58</sup>

### Composting food scraps at home is one of the most important aspects of home composting

Vegetable and fruit waste, meal leftovers, coffee grounds, tea bags, stale bread, grains, and general refrigerator spoilage are everyday food scraps in most households. Each year, a typical household throws away around 474 pounds of food waste—this is about 1.5 pounds per person a day in the United States. However, it is important to check with your municipal waste management district to see if you are allowed to compost food scraps at home.

Some cities have issues with the composting of food scraps at home, stemming from concerns of attracting rodents and other vermin (raccoons, opossums, scavengers, etc.) to an inadequately secure compost bin. Therefore, a community may desire more control over food waste recycling. Up to 90 percent of waste thrown out by businesses like supermarkets and restaurants is food scraps. In fact, food scraps are the third largest segment of the waste stream with nearly 26 million tons generated each year. Of the overall waste stream, about 12% is food-related, behind paper and plastic.<sup>59</sup>

## How to Create a Home Food Waste Plan

### Food Scraps at the Stove

Simmer a small pan of scraps like peels, skins, and stalks for a few hours, let cool, then store in your refrigerator until you desire to make a soup or sauce. The stock is delicious, and you just recycled veggies as well!

Many people who have a garbage disposal in their sink do not consider that the grinds in their disposal merge with the waste stream leaving their house and into the larger waste stream of their municipality. With home composting this waste can be kept at your household and not passed downstream.<sup>60</sup>

### The Kitchen Compost Pail

The best way to store food scraps until thrown into the compost bin is in a securely lidded Kitchen Compost Pail. This can be kept near the sink or beneath it. You can purchase a food scrap pail (to see an example of a kitchen compost pail

you can buy, go to <http://www.homecompostingmadeeasy.com/kitchenpail.html>) that is specifically designed to securely store food scraps. What to look for: a tight-fitting lid, fitting lid, adequate storage, aesthetic appeal, washable, and with a handle. You can also use a plastic container, such as a 1-quart yogurt container for small quantities of scraps. To avoid the compost pail from becoming smelly, empty the containers daily or every few days—depending on how much waste you generate. To cut down on odor or gnats, cover the scraps with a wet paper towel.<sup>61</sup>

A 5-gallon bucket with tight lid can be used outside to store food scraps for longer periods if it is inconvenient to add them to the compost, but odors and flies may become a problem—especially in summer. Sprinkling an inch or two of sawdust, peat or coconut coir on top of layers helps prevent flies and odors. Food scraps can also be stored in a plastic container in the freezer to control these problems.<sup>62</sup>

### The types of material you can compost depends on...

If the compost is for your **garden** follow these steps:

#### 1. Choose and set up your compost bin

Your compost bin can be made out of chicken wire or plastic fencing, or you can purchase compost bins such as those listed above. If you're making one, the size should be between 3' and 5' square to make it easy to turn the compost within it.

## 2. Put your "collection container" in the kitchen

Any lidded pot or container can serve as a food waste collection container. Place it in the kitchen, and be sure to tell everyone about it and why it is there!

Much of your food waste can be added to your compost - fruit and vegetable peels, coffee grounds, egg shells and more. Please remember that animal products should not be composted. Meat and dairy products, as well as oils, should be disposed of in your regular waste container.

## 3. Carry scraps to the bin, and turn it once a week or so with a shovel or pitchfork

That's it! Carry the scraps to the bin every day, turn it once a week, and soon you will have finished compost. Please remember that new food waste should be covered with older materials or leaves. This is particularly important if your bin does not have a cover.<sup>63</sup>

Typically, the following should not be composted:

- **Human waste or pet litter** - They carry diseases and parasites, as well as cause an unpleasant odor.
- **Diseased garden plants** - They can infect the compost pile and influence the finished product.
- **Invasive weeds** - Spores and seeds of invasive weeds (buttercups, morning glory, quack grass) can survive the decomposition process and spread to your desired plants when you use the

finished compost.

- **Charcoal ashes** - They are toxic to the soil microorganisms.
- **Glossy paper** - The inks are toxic to the soil microorganisms.
- **Pesticide-treated plant material** - These are harmful to the compost food web organisms, and pesticides may survive into the finished compost.<sup>64</sup>

### How can I compost meat and dairy?

- Bokashi Kitchen Composters is a composting method developed in Japan that uses a Bokashi culture mix and anaerobic containers to compost even meat and cheese. It is an odorless, quick, and convenient way to compost. For more information, go to <http://www.bokashicycle.com/howitworks.html>.

### For other ways to compost your food scraps, please go to:

<http://www.homecompostingmadeeasy.com/foodscraps.html>

### For answers to frequently asked questions about composting, please go to:

[http://www.recyclenow.com/home\\_composting/get\\_advice/buy\\_a\\_bin\\_faqs/](http://www.recyclenow.com/home_composting/get_advice/buy_a_bin_faqs/)

## Part VII: Eco-Friendly Cooking



### A. Eco-Friendly Cookware

As important as it is to buy locally and eat organic foods, cooking in eco-friendly ways, especially with eco-friendly cookware, is essential. PristinePlanet.com offers a variety of eco-friendly cookware options, from non-toxic baking pans, recycled frying pans, to chemical-free cookware.

- When you cook with oil or vinegar, **use a non-aerosol brand**, such as **Gourmè Mist** (<http://www.gourmemist.com/>). These misters do not contain alcohol, additives or chemical propellants; in addition, the bottles are recyclable, making them a more sustainable choice for the environment.
- If you are interested in saving energy and money on your electric bills (in addition to lightening your carbon footprint!), switch to a refrigerator that is Energy Star rated ([http://www.energystar.gov/index.cfm?c=refrig\\_pr\\_refrigerators](http://www.energystar.gov/index.cfm?c=refrig_pr_refrigerators)). If you do not have the

funds to get a new refrigerator, try and keep your refrigerator full, which means your refrigerator does not have to work as hard to cool a small amount of food. You can fill empty space in your refrigerator or freezer with crumpled newspapers or full water bottles to improve cooling, thus saving electricity and money.

- **Grow your own vegetables and herbs.** Cooking with your own veggies and herbs means fresher produce and the peace of mind of knowing where your food is coming from.<sup>65</sup>

### Some Energy Saving Tips While You Cook

- Cut your food into smaller pieces before you cook it, which will shorten the cooking time on such foods like meat and potatoes.
- Cook more than one item at a time. For example, you can boil pasta and eggs at once—even if they're not for the same recipe—and

you cut down on your energy use.

- Invest in pots, pans and casserole dishes with tight-fitting lids, then keep the lids on while cooking to reach the desired temperature quickly. This allows you to cook your favorite foods in less time, and decreases your carbon footprint in the process.<sup>66</sup>
- Outdoor grills take less energy than your stove and keep heat out of the house, reducing costly strain on your AC.
- Other tips: don't leave the tap running while scrubbing dishes and only run a full dishwasher. Plus, stock your pantry with the best natural cleaners: baking soda, lemon juice, white vinegar and club soda.<sup>67</sup>

### What to Look for in Eco-Friendly Cookware

The majority of most cookware is made from non-renewable resources, such as “metals mined from the earth in excavation and milling procedures that are detrimental to the environment.” In addition, a great deal of cookware is manufactured with health-harming Teflon. Teflon or (Polytetrafluoroethylene (PFTE) coated cookware has been met with attention in the news with stories stating that it could pose health risks to users; although some question the extent of the health risk, many people are choosing non-Teflon options to play it safe.<sup>68</sup> Some options include purchasing cookware made with metals that conduct heat more efficiently, buying non-stick cookware with more eco-friendly alternatives, as well as buying secondhand pans.<sup>69</sup>

### Examples of Eco-Friendly Cookware

**GreenPan** cookware doesn't use Teflon and instead uses their new material called Thermolon that works great as a non-stick surface. It remains stable and inert in extremely high temperatures, up to 850°F As an added bonus they claim their production methods cause 50% fewer greenhouse gases to be released.<sup>70</sup> To get more information, go to <http://www.green-pan.com/>

**Clad Cop-R-Chef:** this cookware takes advantage of heat efficiency of the two top metals: copper and aluminum. The aluminum core on the bottom and sides of the cookware provide even heat distribution. The copper exterior offers superior heat conductivity. To get more information go to <http://www.activeconcepts.ca/store/>

**To see more examples of eco-friendly cookware, go to**

<http://www.greenyour.com/home/kitchen-cooking/cooking/tips/buy-eco-friendly-and-teflon-free-cookware> and scroll to the bottom of the page.

Quoted from Greenyour.com available at <http://www.greenyour.com/home/kitchen-cooking/cooking/tips/buy-eco-friendly-and-teflon-free-cookware>.

Your best bet is to choose long-lasting cookware based on the type of cooking you do the most, which means you may end up with a mix of pieces in your kitchen: cast iron for long slow cooking, copper for delicate sauces, and maybe a non-stick aluminum pan for low-fat cooking. Having the

right pan for the job means you'll not only get a perfectly cooked meal, but you'll also use fewer resources and less energy to get the job done. Here are some money- and energy-saving tips to keep in mind while you shop:

- **Look for cookware made of aluminum, cast iron, or copper.** These metals have the highest heat conductivity and will use your stove's heat more efficiently.
- **Buy individual pieces.** Forgo cookware sets that include pots and pans you'll rarely use. This practice saves kitchen space and decreases demand for the raw materials and energy used to manufacture cookware.
- Shop for cookware made with **recycled materials.** Most metals are recyclable, and some manufacturers seek out these materials and say so on their packaging.
- Choose pieces that are **"oven-safe"**. These pots can do double-duty and be used in the oven as well as on the stove. Some cookware may even do triple-duty: stove, oven, and microwave.
- **Buy used cookware.** Once you know what you want, visit thrift stores to find items that are still in good condition.
- Buy pieces that **come with a lid.** Cooking your meals with the lid on allows you to turn down the heat and reduce energy use.
- Buy pots and pans with **flat bottoms.** This is particularly important if you have flat-surface burners on your electric stove. The bottom of the pan needs to make solid contact with these heating elements or the pan will not conduct heat to the food efficiently. For example,

boiling water uses 50 percent more energy in a well-used pan with a warped bottom compared to a pan with a flat bottom.<sup>71</sup>

- Look for **hard-anodized cookware.** "Hard-anodization is an electro-chemical process that hardens aluminum, and hard-anodized aluminum is 30% harder than stainless steel. During hard-anodization, aluminum is submerged in an acid bath, then subjected to electrical charges. The result is a chemical reaction wherein the surface of the aluminum combines with oxygen to become aluminum oxide. This reaction is also known as oxidation, a process which occurs spontaneously in nature. Hard-anodization is actually controlled, accelerated oxidation."<sup>72</sup>

### More information on Hard-Anodized Cookware: What does it do?

Hard-anodized surfaces resist abrasion and corrosion and have a long life span. They are also the most durable pan you can buy, since the surfaces do not chip or peel. An anodized finish is chemically stable, does not decompose, and is nontoxic. Anodized surfaces are heat-resistant to the melting point of aluminum (1,221°F). Most important for cookware, hard-anodizing makes cookware surfaces so ultra-smooth that they become virtually nonporous (without pores). Pores in metal cookware are one of the leading reasons why foods stick while cooking. So, because hard-anodized aluminum cooking surfaces are virtually nonporous, you have fewer problems with stuck-on foods, since the surfaces are stick-resistant.<sup>73</sup>

## B. Microwaving Plastic: Background Information from Harvard University's

### Medical School

(Quoted from

<https://www.health.harvard.edu/fhg/updates/update0706a.shtml>):

When food is wrapped in plastic or placed in a plastic container and microwaved, substances used in manufacturing the plastic (plasticizers) may leak into the food. In particular, fatty foods such as meats and cheeses cause a chemical called diethylhexyl adipate to leach out of the plastic. The FDA, recognizing the potential for small amounts of plasticizers to migrate, closely regulates plastic containers and materials that come into contact with food. Before approving a container, the FDA conducts tests to make sure that it doesn't leak unsafe amounts of any substance into food.

The FDA tests measure the migration of chemicals at temperatures that the container or wrap is likely to encounter during ordinary use. For microwave approval, the agency estimates the ratio of plastic surface area to food, how long the container is likely to be in the microwave, how often a person is likely to eat from the container, and how hot the food can be expected to get during microwaving. The scientists then measure the chemicals that leach out and the extent to which they migrate to different kinds of foods. The maximum allowable amount is 100–1,000 times *less* per pound of body weight than the amount shown to harm laboratory animals over a lifetime of use. Only containers that pass this test can display a microwave-safe icon,

the words “microwave safe,” or words to the effect that they're approved for use in microwave ovens. A container that's not labeled safe for microwave use isn't necessarily *unsafe*; the FDA simply hasn't determined whether it is or not.<sup>74</sup>

### The Harvard Medical School Family Guide Gives Some Tips About Safe Microwaving:

- Most takeout containers, water bottles, and plastic tubs or jars made to hold margarine, yogurt, whipped topping, and foods such as cream cheese, mayonnaise, and mustard are not microwave-safe.
- Microwavable takeout dinner trays are formulated for one-time use only and will say so on the package.
- Don't microwave plastic storage bags or plastic bags from the grocery store.
- Before microwaving food, be sure to vent the container: Leave the lid ajar, or lift the edge of the cover.
- Don't allow plastic wrap to touch food during microwaving because it may melt. Wax paper, kitchen parchment paper, or white paper towels are alternatives.
- If you're concerned about plastic wraps or containers in the microwave, transfer food to glass or ceramic containers labeled for microwave oven use.<sup>75</sup>

### Microwaving Tupperware

For consumer safety and health, Tupperware Corporation of Orlando, Florida has specific Tupperware that is microwavable. It identifies these products on the label so that consumers can use only the products that will not warp or melt.<sup>76</sup>



## Part VIII: Supermarket Sustainability Profiles

Here is some general information on what major supermarket retailers are doing to surf the sustainable wave—from energy reductions in-store to employee education on sustainability.

### A. Wegmans

For Earth Day on April 25, 2009, Wegmans Food Market went the extra mile to relay the importance of sustainable choices to their customers and had demonstrations and tastings throughout the store. On April 25, when customers brought in a plastic grocery bag tightly filled with used plastic bags, they could exchange it for a new reusable bag (one per household). “Since we introduced our reusable shopping bags (in 2007) and our new stronger plastic bags (in 2008), we’ve been able to reduce our plastic use by 30%, or 146 million fewer bags per year,” said Jason Wadsworth, Wegmans’ Sustainability Specialist. “This shows how big a difference people working together can make by

shifting some everyday choices.”

Choosing organic foods is another shift toward greater sustainability, and customers had the chance to sample organic foods throughout the store, while learning about the practices that go into growing and producing such foods. These include innovative technologies to lower energy use, reduce water used for irrigation, and reduce reliance on artificial fertilizers and pesticides.<sup>77</sup>

### What is Wegmans Doing for Sustainability?

Adapted from Wegmans’ Priorities and Achievements Section from their website, available at

<https://www.wegmans.com/webapp/wcs/stores/servlet/CategoryDisplay?categoryId=281472&storeId=10052&catalogId=10002&langId=-1>:

### **Store Lighting**

- All new, remodeled stores, and distribution centers (where re-lamping is underway) are using new fluorescent technology including Compact Fluorescent Light Bulbs (CFLs). Wegmans is projecting a 50% reduction in energy demand for distribution, equal to powering 470 homes for one year.

### **Light Bulb Reduction Program**

- Lights have been removed/shut off where not needed in all stores.

### **Refrigeration**

- Since 1997, all new stores use Glycol, a non-ozone depleting refrigerant, for low and medium-temperature cases.
- Wegmans is also performing "tune-ups" of refrigeration systems for more efficient operation.

### **Fleet/Transportation**

- Over 100 new 2008 tractors will reduce emissions by 90% compared to older trucks. Strategies to improve miles per gallon (MPG) projected to reduce fuel use by 40,000 gallons in 2009.

### **LEED (Leadership in Energy and Environmental Design)**

- Wegmans is investigating in LEED certification for new buildings.

### **Waste Reduction, Packaging and Recycling**

- A Packaging Guide has been established for Wegmans' merchants to use in discussions with vendors. Goal: to move toward packaging made from renewable or fewer raw materials (#1 and #2).

- **Food Containers:** in 2008, all Wegmans stores introduced "food pails" made from 100% recycled paper (35% post consumer content) as an alternative to plastic in the Wokery.
- Wegmans is in the process of converting from #6 plastic to #1 recyclable plastic containers in their salad/fresh foods bars.
- Wegmans stores currently recycle approximately 62% of all waste and are actively working to increase that percentage.
- **Cardboard and office paper:** in 2008, recycled over 84 million pounds (saving over 440,000 trees).
- **Plastic bags and wrapping material:** Wegmans began recycling plastic bags and shrink wrap in the 1990s. In 2008, recycled 2.75 million pounds (Enough saved energy to heat 370 homes for one year)
- **Construction Recycling:** On the company's latest store construction site (in Rochester, NY in 2008), the company prevented 119 tons of materials (wood, stone, plastic, cardboard, and steel) from entering landfills, as these materials were either reused or recycled.

### **Food**

- In 2008, Wegmans donated over 16 million pounds, still wholesome and good to eat but not in condition to sell, to food banks in their marketing areas. In addition, 1.7 million pounds of food waste and produce waste were sent to livestock farmers further reducing food being sent to a landfill.

### **Shopping bags**

- Wegmans introduced reusable shopping bags in March 2007, and customers have

purchased over 2 million reusable shopping bags.

- Larger plastic bags were introduced to all stores in 2008. More items per bag with less breakage because bags are stronger. Although the bags are larger, Wegmans will use fewer bags and less plastic. Since 2007 when Wegmans introduced the reusable shopping bag along with their new stronger plastic bag, the retailer has reduced their plastic usage by 30%.

### Local Produce

- Wegmans works with hundreds of local growers across market areas who deliver fresh-picked produce directly to their stores.

### Organics

- Wegmans Organic Research Farm was started in 2007. It is a 50-acre farm in Western New York is a testing ground to learn about the challenges faced by organic growers, to learn how to successfully grow organic and then share those findings with their grower/partners.<sup>78</sup>

## B. Harris Teeter

Adapted from Harris Teeter's Sustainability Section from their website, available at [http://www.harristeeter.com/about\\_us/sustainability/sustainability.aspx](http://www.harristeeter.com/about_us/sustainability/sustainability.aspx):

### Refrigeration

- Harris Teeter stores have converted all refrigeration plants to natural refrigerant (ammonia) coolant instead of class 2 ozone

depleting refrigerant.

### Fleet/Transportation

- **Reduced Fuel Consumption:** processes have been implemented to maximize the space of outbound trailers delivering to Harris Teeter stores. This increase in space maximization has reduced the total miles driven by over 15% while Harris Teeter continues to expand throughout the southeast.
- Harris Teeter has a **Tractor Idling Policy**, which reduces the amount of time tractors spend idling. The engines computer will shut down the tractor's engine if it idles more than 6 six minutes. This Idling policy has reduced the amount of fuel consumed and harmful pollutants.
- **Cleaner Diesel Burning Engines:** Harris Teeter tractors began using "ultra:" low sulfur diesel fuel during the spring of 2007.
- Harris Teeter uses reusable plastic pallets when shipping products to stores. The retailer also reuses all general merchandise and health and beauty plastic totes and milk crates from Hunter dairy.

### Store Design and Lighting

- Two Harris Teeter distribution centers have been re-lamped with low energy fluorescent lighting fixtures that utilize "motion" activation technology. These new lighting fixtures have reduced energy usage by 10%.
- Harris Teeter has 35 stores that carry the EPA's Energy Star label.
- Systems that are currently in place at Harris Teeter include:

toilets, and faucets including waterless urinals, solar re-charging flush valves and automated hand sink faucets

- High Efficiency Gas Water Heaters (94 – 96% efficient) Heat reclaimed from refrigeration systems provide heat for water and space conditioning
- Dual Path HVAC systems to control humidity
- Demand exhaust hood control system that only operates during cooking events
- Harris Teeter's first LEED store in Crozet, Virginia opened in May, 2009: this store is 25% more energy efficient and has a water usage reduction of over 40%.

### Waste Reduction, Packaging and Recycling

- Harris Teeter requires all equipment vendors and suppliers to provide information on their current recycling, waste disposal and green initiatives.
- Harris Teeter has started replacing waxed coated packaging with Reusable Produce Containers (RPC's). The use of these RPC's will reduce tons of waste entering landfills on an annual basis.
- Harris Teeter has recently converted **produce bags** and **bakery bags** to a 100% degradable bag. The company also uses plant based (non-petroleum) plastic containers for in-store fresh cut fruit and for HT Traders salad kits.
- **Cardboard / Mixed Paper:** Harris Teeter recycles about 34,000 tons of cardboard and mixed paper each year. Recycling this amount of paper fiber is equal to saving 574,700 trees.
- **Plastic/Shrink Wrap:** Harris Teeter also recycles about 2 million pounds of plastic per

year. This plastic is mixed with sawdust to create composite-like lumber that is used for deck boards.

- **Shopping Baskets:** Harris Teeter's shopping baskets are made from 100% recycled plastic.
- **Shopper Program:** Recycling containers can be found in the foyer of all Harris Teeter stores. These bins provide shoppers an easy way to recycle both paper and plastic bags. In addition to recycling plastic grocery bags, customers can also recycle dry cleaning film, bread bags, produce bags, newspaper bats, etc.

### Shopping bags

- **Paper Bags:** all Harris Teeter paper grocery bags are produced from 100% recycled paper. By upgrading their paper bag from 35% recycled paper in 2007 to 100% recycled product Harris Teeter estimates they are able to save 22,293 trees a year.
- **Reusable Bags:** Harris Teeter also offers reusable shopping bags for \$0.99. Each reusable bag can replace over 1,000 plastic bags during its lifetime.
- Harris Teeter plastic grocery bags are made with 40% recycled plastic and are recyclable.

### Local Produce

- Supporting locally grown produce is another way Harris Teeter helps improve the environment and local economies. The HT Locally Grown logo, assures that the produce has traveled 6 or fewer hours from the farm to the store. This shorter drive time reduces the carbon footprint on the environment while supporting local farmers and their neighborhoods.

## Organics

- Harris Teeter is committed to providing its customers with the widest variety of top quality fruits and vegetables the world has to offer. One of the ways Harris Teeter achieves this commitment daily is by offering a vast array of organic fruits and vegetables.
- Partnering with certified organic farmers who follow the United States Department of Agriculture guidelines for organic farming is a top priority. USDA certification ensures that Harris Teeter's organic farmers grow their crops without the use of synthetic pesticides or herbicides and are committed to being good stewards of our environment.<sup>79</sup>

## C. Whole Foods Market

Unless cited otherwise, the following is adapted from Whole Foods' Sustainability Section from their website. (Available at <http://www.wegmans.com/webapp/wcs/stores/servlet/CategoryDisplay?langId=-1&storeId=10052&catalogId=10002&categoryId=281079>)

### Energy Reduction

- Whole Foods recently contracted to add solar panels to more than 20 locations. Including existing installations, solar panels will be brought to the rooftops of more than 30 of the company's stores nationwide. With an installation at its Berkeley, California store in 2002, the company became the first retailer to introduce solar power as its primary lighting source. Whole Foods hopes to have close to 70 total locations with rooftop solar panels --

almost one-fourth of its total number of stores -- using solar power.<sup>80</sup>

- Whole Foods offsets its use in its North American locations, bringing its four-year total purchase to 2 million megawatt-hours of renewable energy credits from wind farms. This is the equivalent of the electricity used in more than 160,000 homes in one year. In December 2005, the grocer became the first Fortune 500 company to offset 100 percent of its electricity use with wind energy credits.<sup>81</sup>

### Store Design and Lighting

- Whole Foods received the first "Green Building" award in Austin, Texas in 1998 for the expansion and renovation of the retailer's corporate headquarters. Sustainable material specifications combined with conscientious construction methods resulted in a healthy, durable facility. Because of the 42% waste reduction, Whole Foods was profiled by the EPA as a construction waste reduction and recycling record-setter.
- Whole Foods set internal energy-reduction goals for new stores as well. The company is a steering committee member of the Department of Energy's Retail Energy Alliance and is participating in programs to develop buildings that will use 30 percent to 50 percent less energy than required by code, as well as working with manufacturers and partners to develop increasingly higher energy-efficiency equipment and systems for supermarkets.<sup>82</sup>

### Waste Reduction, Packaging and Recycling

- Whole Foods promotes the purchase of bulk

food and other products utilizing reduced or reusable packaging, as well as encouraging shoppers to reduce waste through their "nickel per bag" rebate program.

### **Shopping bags**

- Whole Foods teamed up with pop music icon and environmental activist Sheryl Crow to create a special edition of their signature reusable shopping bag, A Better Bag™. These bags are made from 80 percent post-consumer recycled plastic bottles. In fact each bag represents approximately two or three 20-ounce plastic bottles depending on the size of the bag you choose.
- As part of the continued efforts to care for both communities and environment, Whole Foods and Sheryl Crow are using this campaign to help raise awareness for the Natural Resources Defense Council (NRDC) and its Simple Steps program. Whole Foods made a donation to the NRDC in support of their initiative and each bag bears the SimpleSteps.org web address encouraging shoppers to learn more about how they can get involved.
- In April 2009, Whole Foods became the first U.S. supermarket to eliminate disposable plastic grocery bags at all of its store checkouts. The company announces that it Whole Foods has kept an estimated 150 million plastic bags out of landfills since last Earth Day (April 25, 2008).<sup>83</sup>

### **Local Produce**

- Whole Foods' history and reputation are intimately linked to their support of local

farmers. For more than 25 years, Whole Foods have worked to provide its consumers with the broadest possible selection of the highest quality produce available. Whole Foods' search for local produce begins in every community where it does business. The company is permanently committed to buying from local producers whose fruits and vegetables meet high quality standards, particularly those who farm organically and are themselves dedicated to environmentally friendly, sustainable agriculture. Whole Foods is also greatly increasing its efforts in this regard by further empowering their individual store and regional buyers to seek out locally grown produce.

### **Organics**

- Whole Foods has been an advocate and supporter of organic agriculture throughout the past 20 years. Over time, Whole Foods has developed relationships with organic farmers, educating each other about the variety of organic produce available at Whole Foods stores.
- Whole Foods is also an advocate and supporter of naturally raised meat and poultry. In addition to telling consumers their concerns about added hormones and antibiotics, the company works with ranchers and producers to develop hormone and antibiotic-free alternatives for their customers to buy.
- Whole Foods encourages fewer and safer pesticides in non-organic foods, in educating its customers about the value of foods produced without harmful or questionable

food additives, and in working with manufacturers to supply their stores with foods that meet Whole Foods' strict quality standards.

### **Education and Public Participation**

- Whole Foods educates their customers about the importance of food safety measures and techniques, including their concerns about irradiation, food borne illnesses, food handling, and material safety.
- Whole Foods uses a two-pronged approach to consumer education and support for public participation in creating a sustainable future. TAKE ACTION CENTERS are located in every store, offering customers a wide variety of information on local, regional, national, and international issues of concern. Customers not only learn about important issues like genetic engineering, organic foods, pesticides, and sustainable agriculture, but Whole Foods offers them the means to affect change by keeping them updated on new legislation and the tools they need to effectively participate in shaping those issues.
- Wholefoodsmarket.com provides the second prong of their education and public participation strategy. The website provides customers with an in depth investigation into the issues that are important to the organic and natural products buying community.

### **D. Safeway**

Unless cited otherwise, the following is adapted from Safeway's Environment from their website. (Available at: <http://www.safeway.com/IFL/Grocery/Environ>

ment-Sustainability):

### **Energy Reduction**

- As one of the largest retail consumers of energy, Safeway has chosen to be a leader in renewable and socially responsible energy procurement and use. In 2006 Safeway developed a Greenhouse Gas and Sustainability Initiative that includes partnerships with entities like the Environmental Protection Agency (EPA) and the California Climate Action Registry. Safeway has committed to reducing greenhouse gas emissions by 6% from their 2000 baseline, and to continue searching for ways to lessen the company's dependence on traditional fossil fuels.
- Safeway has completed 14 solar energy projects in California, for instance, with another nine underway. It is also bought more than 90 million kilowatt-hours of wind power, which has shrunk its carbon footprint by more than 63,000 tons of greenhouse gas emissions.<sup>84</sup>

### **Refrigeration**

- Safeway is in the process of replacing Class I refrigerants (the most ozone-depleting) in all existing stores. New stores use non-ozone-depleting refrigerants exclusively. At Safeway's distribution centers and many of their manufacturing plants with large refrigeration systems, ammonia is used as a refrigerant, which does not contribute to ozone depletion or global warming.

### **Fleet/Transportation**

- Since 2006, Safeway has been a member of

the EPA's SmartWay Transport Partnership. This voluntary public-private alliance is committed to adopting fuel-saving and air-pollution-control strategies that reduce fuel costs and significantly decrease greenhouse gases.

- Has reduced freight by making their own water bottles and ice cream containers in their own plants versus trucking them from packaging suppliers.

### **Store Design and Lighting**

- A store in Santa Cruz, California being built to LEED standards will include a solar panel array that will deliver a fifth of the store's energy needs, while a fuel cell will satisfy another 20 percent of the expected energy use.<sup>85</sup>

### **Waste Reduction, Packaging and Recycling**

- Safeway stores recycle about 85 percent of their solid waste through a series of programs that have diverted hundred of thousands of tons of garbage from landfills.
- The company's 85 percent diversion rate exceeds the 50 percent mandated goal of California, the state in which the retailer is headquartered. All told, the programs have diverted more than 500,000 tons of waste materials.<sup>86</sup>
- Safeway has been a major recycler for nearly 50 years and supports the global drive towards Zero Waste business practices. Safeway began recycling cardboard years before other U.S. grocers and pioneered aluminum recycling in the industry. Today, Safeway's retail and support facilities are part of a comprehensive program to divert solid

waste from landfills into recycled products. Each of these programs, carried out at stores and distribution centers, redirects waste from landfills back into the economy. This reduces the cost of waste hauling and disposal and the negative carbon footprint associated with these activities. It also helps municipalities reach mandated reductions in solid waste. In California, where Zero Waste is a goal, each of Safeway's stores typically diverts over 85% of its materials from landfill disposal – well above the current state-mandated goal of 50%.

- Safeway increased their use of reusable distribution packaging, such as tote bins for Safeway.com and Safeway's distribution centers' restocking of general merchandise, personal care and liquor items.

### **Shopping**

- Reduced the need for virgin plastic in Safeway's supply chain. The company's reusable grocery bags are 100% recyclable and are manufactured with recycled polypropylene plastic, which helps build the worldwide recycling infrastructure.
- Sales of reusable grocery bags have increased 300 percent between 2007 and 2008.<sup>87</sup>

### **Education**

- Safeway incorporates environmental training in their New Employee Orientation, Retail Leadership Development and Safety Champions programs. The company also offers specific training programs in source reduction, recycling and environmental compliance. Safeway strives to educate customers about energy management and

about their participation in numerous federal and state programs aimed at reducing energy use in their stores and other facilities.

## E. Giant

### Energy Reduction

- Newer stores are designed with reflective roofs, which reduce heat absorption and use less air conditioning in the summer, and special dimming systems that dim lights based on the amount of daylight harvested.
- Giant has been recognized for energy-efficient day lighting, automatic occupancy sensors, and refrigeration systems with high-efficiency fan motors.

### Refrigeration

- Energy use in refrigeration and food storage is necessary to provide safe, fresh quality food, so the company has been working to reduce greenhouse gas emissions in Giant stores, distribution centers and transport.

### Fleet/Transportation

- Giant's drivers, trained in methods that reduce fuel usage and CO<sub>2</sub> output, have successfully increased fuel economy. Giant is also working with the EPA and freight industry to improve energy efficiency and reduce greenhouse gases and air pollution through the EPA Smart Way Transport Partnership.

### Store Design and Lighting

- In 2007, Giant was the only supermarket chain selected by the U.S. Green Building Council (which develops and administers the nationally accepted LEED-EB standard for

green buildings) to participate in a program for retailers integrating "green" technology into existing buildings.

- Giant was named an ENERGY STAR LEADER in 2007 by the U.S. Environmental Protection Agency (EPA) as a result of the company's success in improving energy performance across Giant's buildings.

### Waste Reduction, Packaging and Recycling Shopping

- Giant accepts #2 and #04 plastic shopping bags, dry cleaning bags and newspaper bags. They send them, plus all of the shrink wrap from stores, to Giant's plastics recycling company AERT (Advanced Environmental Recycling Technologies Inc.). The plastic becomes composite decking (ChoiceDek at Lowe's).

### Shopping

- All Giant stores sell reusable bags for .99 and insulated bags for \$1.99. In addition, they deduct five cents from each customer's total shopping bill for any shopping bag they bring from home for packaging their groceries - whether it's a paper, plastic or reusable bag.<sup>88</sup>

## E. Kroger

Adapted from Kroger's 2008 Sustainability Report, available at:

<http://www.thekrogerco.com/documents/KrogerSustainReport08.pdf>.

### Energy Reduction

- Since 2000 Kroger has reduced overall energy consumption by more than 22%—or 1.6 billion kilowatt hours. Those 1.6 billion

hours saved more than 1 million metric tons of greenhouse gas emissions, electrical, and gas consumption.

- Using 2000 as a base, Kroger stores have a goal of reducing overall energy consumption by 30% by 2010. To achieve these goals, Kroger is investing in new technology and processes as well as partnering with their associates to reduce energy through behavior change. Technology changes have included lighting retrofits, new motors for Kroger's refrigerators and freezers, and control devices in vending machines.

#### **Refrigeration**

- Kroger uses heat produced by refrigeration equipment to also heat the air and water in their stores, thus reducing electrical and gas consumption.

#### **Fleet/Transportation**

- Kroger is working to reduce the environmental impact of their fleet by reducing the total number of miles their fleet travels, ensuring Kroger's equipment operates at peak performance, and implementing fuel-saving measures. Together these efforts will reduce the company's mileage by 2% over a three-year period and save more than 1 million gallons of diesel fuel.
- To achieve these goals, Kroger is using a state-of-the-art mapping program to route trucks more efficiently along with expanding the usage of multi-temperature trucks to transport frozen, refrigerated or dry goods in one truck, and improving the insulation of the company's refrigerated trucks. Kroger is also standardizing top speeds and idling protocols

#### **Waste Reduction, Packaging and Recycling**

- In 2007, Kroger recycled more than 1 billion pounds of corrugated cardboard, which was a 14 percent increase over the previous year.
- Through Kroger's Plastic Recycling Program, plastic bags, dry-cleaning bags, and plastic shrink-wrap can now be recycled in all stores. Plastic bags are collected and recycled into other products such as plastic landscape bricks, plastic lumber and other plastic bags. This program resulted in 9.1 million pounds of plastic recycled from Kroger stores and distribution centers last year. In 2008, the company expects that number to grow to 12 million pounds.
- As a result of the Bag2Bag recycling program in many of Kroger's stores, the grocery bags used in some of the company's retail divisions contain 25 percent recycled content.
- Since 2005, Kroger reduced the amount of office paper we use by more than 91 million sheets, which represents more than 455 tons of paper.
- Waste and food scraps from Kroger's deli and meat departments are picked up by rendering companies. Several of the company's divisions, including Fred Meyer, QFC, Ralph's and Food 4 Less, compost produce that can no longer be sold.

#### **Shopping**

- Kroger sold 2.5 million reusable bags in 2007 and intend to sell 10 million in 2008.
- As a result, Kroger introduced EarthSound bags, which contain some recycled plastic.
- A second line of bags with a thermal lining to help preserve frozen and refrigerated foods is

is also offered.

## Education

- Kroger uses a web-based training program called Strive for Five that shows new associates how to optimally fill a plastic grocery bag. By placing more items in a bag and avoiding double bagging, the company has the potential to dramatically reduce plastic bag usage. Today, Kroger averages 3.4 items per bag. The goal is to reach 5 items per bag, which would reduce bag usage by almost 2 billion bags per year.
- Kroger's SAVE 5 program has helped their 320,000 associates learn ways to reduce energy consumption by turning off lights and equipment, closing doors, monitoring case temperatures and regularly checking equipment for needed maintenance.<sup>89</sup>

## F. Albertsons

Unless cited otherwise, the following is quoted from Albertsons' Environmental Affairs Section on their website. (Available at: <https://shop.albertsons.com/eCommerceWeb/CommunityAction.do?action=getEnvironment>):

### Energy Reduction

- In 2003, the company continued its efforts to reduce electricity consumption through the incorporation of energy control technologies in existing facilities and the identification and application of energy conserving technologies in both new and existing facilities.
- Lighting Retrofits: installation of high efficiency lighting systems.
- Energy Management Controls: installation of

computer control hardware and software to help maximize efficiency of refrigeration, air conditioning, and electrical systems.

- Vending Machine and Heater Controls: utilizing motion sensors to allow vending machines and food "wrapper" heaters to operate only when necessary.
- Use of high efficiency display cases that keep product temperatures constant while reducing energy usage.

### Light Bulb Reduction Program

- Skylights in stores with lighting controls to minimize operation of sales floor lights.

### LEED (Leadership in Energy and Environmental Design)

- The company announced that it had been awarded the New England grocery industry's first LEED certification for a new "green" Shaw's supermarket in Worcester, Massachusetts.

### Refrigeration

- ENVIROGAURD refrigeration systems to minimize refrigeration system energy use while operating at a lower refrigerant charge.
- Use of environmentally-preferable refrigerants (HFCs) in new stores and remodels.

### Waste Reduction, Packaging and Recycling

- Albertsons continues to work with vendors and packaging companies to support the development and use of recyclable containers.
- The company continues its policy of providing convenient plastic bag recycling centers in the grocery stores to encourage

customers to recycle. These resources are used again in the manufacturing of plastic lumber, parking stops and curbing, and other useful products. To promote community recycling, Albertsons stores are listed on the Earth's 911 website ([www.earths911.org](http://www.earths911.org)) as a collection center for plastic bags.

- Albertsons' new bakery and donut boxes, unveiled in 2003, are composed of 100% recycled paperboard and are 100% recyclable, including the special plastic window film. Efforts to shift away from wax-coated containers continued throughout the year and Albertsons anticipates many future sustainable packaging improvements.
- The company recycled over 1.7 million pounds of plastic and 35 tons of cardboard in 2007.
- Albertsons continues to manage electronic and computer equipment, including batteries, as assets. Obsolete equipment and parts are inventoried, palletized and shipped to recyclers which adhere to "zero landfill" policies. If the equipment cannot be sold for reuse, it is scavenged for recyclable parts, a policy which promotes resource conservation while minimizing potential future liability.

### **Greenhouse Gas Reductions**

- Albertsons began a program during 2003 to quantify, claim and trade Greenhouse Gas Emission Reduction Credits (ERCs). This initiative combines environmental stewardship with sound business practices.

### **Organics**

- Albertsons sells the O Organics line of organic products to its stores. Offering a

complete range of the highest quality organic foods at affordable prices, O Organics items are available throughout the store making it easy for shoppers to choose great tasting organics in nearly every aisle.

- The O Organics products now being offered at Albertsons LLC stores range from baby food to dairy, beverages, snacks and full meal options. The brand's debut simplifies the shopping experience for customers whether they're organic newcomers or long time fans, allowing them to stock up on a wide variety of great tasting, 95%+ USDA certified organics in the same location as the rest of their grocery shopping.<sup>90</sup>

### **Education and Reusable Shopping Bags**

- Albertson's LLC hopes that its reusable shopping totes will enhance their "Reduce, Reuse, Recycle" customer-educated campaign. The campaign includes such initiatives as in-store plastic bag recycling, reminders to utilize reusable bags and a goal to reduce plastic consumption throughout its stores.<sup>91</sup>

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