

The Perils of Mass Food Production

Nancy Donley would have done anything to save her son, Alex. Six-year-old Alex contracted an illness due to the presence of E. coli 0157:H7 in his food on a Tuesday in July 1993, one night after his mother's birthday. By Sunday afternoon, Alex had died. The cause: food poisoning (Schlosser, 2001, p.200). The demand for food has always been a struggle to meet in human history. As the human population grows at an alarming rate, actually providing food to all becomes an inconceivable task. In the past 100 years, the solution has been simply to produce more food on a larger scale and treat its production like any other manufactured good. Tragically, mass food production has come with terrible consequences—consequences such as the death of children due to illness, the epidemic of obesity, and the damaged environment. The perils of cultivating and processing food on an industrial scale were recognized and subject to reform early in the development of the food industry. In 1906, muckraker Upton Sinclair published *The Jungle*, a disconcerting novel that provided a detailed account—in all of its sordid details—of a meatpacking factory in Chicago. The public was as outraged as it was sickened, initiating changes in the way food was prepared (“Food Safety Regulation,” 2008, “Controversy over Food Regulation,” paragraph 1). Mechanization increased throughout the century despite nascent vigilance of the food industry’s practices, and new practices equally deplorable as those from 1906 developed. In the years since the Industrial Revolution until present day, processing of food has adversely affected the consumer, providing conditions for poor food quality in terms of nutrition and safety, as well as environmental damage—all in the attempt to feed billions world-wide, an optimistic goal that will not be fulfilled due to business practices.

Given the staggering amount of food produced in modern industrial processing, the cleanliness and nutritional value of the food have been sacrificed. In one day, 200,000 people

develop an illness, 900 seek hospital care, and 14 die as a result of food contamination (Schlosser, 2001, p.195). In 1997, Hudson Foods Inc. disposed of 25-million pounds of ground beef due to contamination, sparking the largest recall of food in American history to that point. The list of food contamination incidents continues: 15 died from food produced by Sara Lee Corp. in 1998, three died due to spinach which was grown in close proximity to cattle-pig farms in 2006, and Taco Bell patrons fell ill by the hundreds due to contaminated lettuce in 2007 (“Update: Food Safety,” 2006, paragraph 2; “Food Safety Regulation,” 2008, “Recent Safety Scandals Highlight Problems,” paragraph 3; Glazer, 2007, “Is Slow Food Better than Conventionally Grown Food?,” paragraph 8). The examples of tainted food are numerous and widespread. Low safety standards and subsequent food poisoning outbreaks arise from the methods of food preparation in factories. A high volume of food is often processed at unethically high speeds for efficiency. A mechanical arm de-hides the cattle, forgoing the opportunity for a human to notice if dirt, manure, or intestines come into contact with the meat. Factory employees work in an assembly line, pulling and cutting as fast as physically possible. If they are lax with the technique of disemboweling the animal or simply overworked, digestive fluids can taint otherwise clean meat. For example, at a Lexington, Nebraska, slaughterhouse, digestive contents spill onto one out of every five cattle carcasses (Schlosser, 2001, p. 216). Time is money, and slaughterhouses are not keen on wasting money. Speed results in more output of meat, which may result in a high rate of contamination. If an outbreak of tainted meat is identified, the processed beef can probably be traced back to one of 13 slaughterhouses that process most of the United States' beef, and because most food subject to contamination is processed in a few large factories, contamination will not sicken a couple of people; rather, hundreds or perhaps thousands can be affected (Schlosser, 2001, pp.195-196). Contamination in one factory can then sicken people from California to China and anywhere in between.

Even when the food is safe—free of deleterious pathogens—the food on the shelves and in

restaurants is far from healthy. To achieve maximum efficiency, not only is food treated like a car, made wholly by machines using assembly lines and industrial methods, but it is also made with the intent to minimize cost. Nothing is more indicative of this application of industrial models than the creation and proliferation of high fructose corn syrup (HFCS), a cheap substitute for cane sugar. Farmers in American history have long been plagued by farm overproduction. When too much of a crop is produced, the prices slip lower and farmers are hurt economically. Since the 1980s, US farmers have been inundated with high taxes and interest rates while having to maintain the latest and most expensive machinery (“Looking into Agribusinesses . . . ,” 2007, “On the Farm,” paragraph 1, and “Farming, the Economy, and World Trade, paragraph 1). Farmers attempt to compensate by producing more and more of one crop, which has traditionally been corn. To make use of the abundance of cheap corn, the food industry sought simply to transform corn into anything from chicken to Big Macs to soft drinks (Pollan, 2006, pp.105-106). The versatility of corn allows it to be transformed and incorporated into otherwise non-corn foods, usually as HFCS. Soft drink companies realized HFCS's potential in 1984. Coca-Cola and Pepsi switched the main sweetener in their drinks from cane sugar to HFCS because it was cheaper. Since 1985, individuals in the US are consuming 158 pounds of various sugars, up from 128 pounds annually (Pollan, 2006, p.104). Today, HFCS can be found in fruit drinks, sports drinks, soft drinks, wine coolers, yogurts, cereals, breads, sauces, meats, condiments, cakes, and almost any processed food found in the supermarket (Ettlinger, 2007, p.67). For food corporations, the popularity of HFCS improves profits because more product is sold at a lower manufacturing cost. However, the public also feels the effects of the seemingly ubiquitous HFCS. This effect is seen with children and adults alike, in an epidemic unique to the past few decades—obesity. An estimated 50-million American adults exceed their body mass index due to an increasingly sedentary lifestyle and, more importantly, their diet (Schlosser, 2001, p. 24). Nutritional requirements set the average number of calories at a maximum;

however, agribusinesses have raised the calorie quota by packing on 200 more calories to the diet of the average American since 1977—an increase in ten percent—due to the ubiquity of HFCS (Pollan, 2006, p.102). If the lethal pathogens do not sicken the consumers, then obesity will surely undermine their ability to maintain a healthy lifestyle. When one considers the effects of mass production of food on the consumer, the quality of food has been severely neglected to the point of a national exigency.

Factory farming and improper cultivation practices are also detrimental to the environment, causing pollution and allowing for an ecological backlash. When corn is planted and picked, its presence can be denoted by the disturbance of nutrients in the soil. When a cow is raised, its presence can be denoted by the waste it leaves behind. If farmers plant millions of stalks of corn and raise thousands of cattle, sheer numbers compound the disturbance to the environment. A dairy cow weighing 1400 pounds has an output of 22 tons of waste per year (Weeks, 2007, “Table: How Much Manure to Animals Produce?”). The difficulty in raising cattle soon becomes what to do with tons of manure. Early agricultural revolutions have provided the answer: use the manure as fertilizer for the next growing season. Manure is stored throughout the year in tanks or lagoons. Over time and aided due to weather and improper storage, manure can spill from these sources and seep into the water table, lakes, and rivers—infesting them with “bacteria, hormones, nutrients, antibiotics, and toxic chemicals.” The excess nitrogen and phosphorous concomitant with manure added to aquatic systems results in algal blooms, which, in turn, deprive other marine life of oxygen and kill many indigenous species. This process occurred in Lowville, New York, where millions of gallons of manure from a lagoon killed 250,000 fish that inhabited the Black River in 2005. The Environmental Protection Agency reports that 35,000 miles of rivers over 22 states and groundwater in 17 have been affected by farm manure (Weeks, “Should Pollution from Factory Farms Be Regulated More Tightly?,” paragraph 3). Factory farms, which raise thousands of cattle in

anticipation of selling those cattle, allow the manure to aggregate and threaten the environment. Even when the manure is used as a fertilizer, occasionally farmers overfertilize their land and manure percolates into the water table. One survey found ten percent of the wells near factory farms had unsafe levels of nitrates (Weeks, “Should Pollution from Factory Farms Be Regulated More Tightly?,” paragraph 4). Modern processes of purifying water attempt to account for bacterial contamination although overfertilization practices provide a formidable risk.

Current agricultural processes also tax the environment through the use of various chemicals applied to crops. In the category of noxious chemicals, none are a larger bone of contention among environmentalists than pesticides. Farmers use a variety of pesticides—about one-billion pounds per year—to keep crops in pristine condition (Hosansky, 1999, “Overview,” paragraph 4). The potency of pesticides could be seen when 13,000 gallons of metam sodium spilled into the Sacramento River from a train in 1991. Soon 40 miles of river were devoid of life (Hosansky, 1999, “Overview,” paragraph 11). Pesticides are everywhere and in everything—finding their way into fruits, vegetables, and even processed foods such as baby food. The prospect of finding pesticides in baby food is possibly the most disturbing; in fact, research has determined that the effects of pesticides on the young are long lasting. Philip J. Landrigan, a pediatrician at the Mt. Sinai School of Medicine in New York City and chairman of a national research council committee, reports that “On any day in the United States, there are several thousand children who are exposed to organophosphates [a class of pesticides] at levels that can be toxic. It is not a rare event” (Hosansky, 1999, “Overview,” paragraph 4). American children ages six months to five years old have a 90% chance of being exposed to 13 different pesticides while one-million children consume dangerous amounts of pesticides per day (Hosansky, 1999, “Is Food Treated with Chemical Pesticides Safe to Eat?,” paragraph 6). The effects of pesticides are diverse: damage to the endocrine and reproductive system, cancer, aggressiveness, hyperactivity, sterility, and neurological problems (Hosansky, 1999,

“Is Food Treated with Chemical Pesticides Safe to Eat?,” paragraph 7; “Looking into Agribusinesses . . .”, 2007, “Organically Grown,” paragraph 1). With pesticides, crop yield is much higher, meaning higher profits for agribusinesses. Mass-produced crops resulting in high profits are the goal of agribusinesses, even when the consumer—possibly a child—is poisoned. When eating food manufactured in factories or grown through large-scale industrial farms, one must constantly be wary of bacterial contamination, high fructose corn syrup, and pesticides.

Proponents of mass-producing food claim that such production will feed the masses at a lower cost; however, food distribution among the public is controlled by few who, at the heart of the matter, desire profits and low competition. An optimistic Ray Cesca, president of the World Agricultural Forum, asks, “Potentially, can we feed everybody? Of course we can.” Cesca believes that the ominous prospect of a human population that outgrows its available resources will be alleviated by the proliferation of modern farming techniques (Clemmitt, 2008, “Can Enough Food Be Sustainably Produced to Feed the Global Population?,” para. 14). On planet Earth, there are currently billions of people who all require proper nutrition to sustain an active life. Supporters of food processing contend that, through the ease of processing and preserving food, factory farms and food processors will feed the scores of humans across the globe; slower methods of traditional farming cannot begin to accomplish such a feat. Attempts have been made to “fix” third-world hunger, especially through US farms. An agricultural powerhouse, the United States has always been a great dispenser of support in countries that experience economic or environmental hardship.

While this ostensibly altruistic policy seems like a well-intentioned and compassionate notion, these large American companies are also driving small farmers out of business. This was the case in Mexico: subsidized US farms out-competed Mexican small farmers. Two-million Mexican farmers, all who could not put their foot in the door of the agricultural industry, abandoned their farms as a result, and 18 million more are struggling to survive on less than two dollars per day

(Clemmitt, 2008, “Do U.S. Farms and Trade Policies Harm...?,” paragraph 16). Since the phrase was coined, “corporate farms” have increased their domination on the market. In the early 2000s, small farmers represented 90% of the farm population, yet only contributed 28% of total agricultural income. Accordingly, 8% of US farmers controlled 75% gross agricultural income in the late 1990s, a trend that continues today (“Looking into Agribusinesses . . .”, 2007, “On the Farm,” paragraphs 1 and 3). Because food is so readily produced and cheaper than ever before, companies with enormous plots of land are able to drive small family farms off their lots, not only in the US, but also in foreign countries—a movement that has been accelerating since the dawn of the Agricultural Revolution. As a result, a full half of the world’s hungry are smallholder farmers (Clemmitt, 2008, “Chronology”). Clearly, local economies are oppressed under the leviathan of a food industry and its desire to drive competition down. Some laud agribusinesses for attempting to feed all humans who need their daily nutritional requirements. But when one considers the toll placed on the environment, the farmland and resources consumed, and the farmers forced out of business, attaining the optimistic goal shared by Ray Cesca and others is not feasible.

Those who think global hunger will be eradicated denounce the perils of mass food production, including poor food quality, damage to the environment, and excessive control of the food market by agribusinesses. Perhaps some day the entire agricultural industry will be reformed and those negative effects will be nothing but a memory in time. But, until then, the public has to decide whether it wants thousands of hamburgers with some inevitably containing E. coli 0157:H7, millions of cans of Coke with a side effect of obesity, or perhaps steak to feed the whole nation with miles of rivers destroyed. A way to amend despicable farm and processing practices was uncovered in 1906, as Upton Sinclair found. Changes in the methods of processing food were initiated by Americans, set ablaze by Sinclair's description of a meatpacking factory they received meat from. The public—the food industry's customer—can determine the success or failure of a food business.

If the customer does not like chicken that is more corn than poultry, then he or she has the right to decline service. Decreasing profits is an effective motivator for change. Only when people are educated about the food they ingest every day, will they demand change back to traditional, wholesome methods of producing food.

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