

Corporatization of the American Food System¹

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Modern agriculture has roots in the 1860s. Prior to 1860, farming was the predominant way of life in America. Farm families made up close to 50% of the U.S. population and farmers were nearly 60% of the workforce. When Abraham Lincoln established the U.S. Department of Agriculture in 1862, he called it the “people's department.” Like Thomas Jefferson before him, he was reaffirming the “yeoman farmer” as the foundation of American society.

The Homestead Act of 1862 opened new land on the western frontier for farming, land previously occupied by Native Americans. Homesteads were initially limited to 160 acres, which was considered enough to sustain a family. In the early 1900s, homesteads were expanded to 320 acres for dry land farming and to 640 acres for livestock production. The intent was not to expand agricultural production but instead to expand control over the continent through occupation. However, much of the homesteaded land eventually fell into the hands of large landowners and land speculators. With completion of the transcontinental railroad in 1869, the West was open for business, including agribusiness.

Wheat flour from the Great Plains, beef from the Southwest, pork from the Corn Belt, and Oranges from California all began to flow to the East. Farming and ranching operations in the West grew far larger than was needed to support a family. Farming was still a way of life for many, but it was becoming a business for many others. Between 1870 and 1890, numbers of farms in the U.S. grew by 80% to 4.5 million. Even with the rapidly growing national population, farming still employed 41% of the U.S. labor force. Production of all major agricultural commodities – wheat, corn, cattle, hogs... – expanded correspondingly, which ultimately triggered the agricultural depression of 1893-94. Widespread farm bankruptcies halted the expansion in farm numbers. Many farmers felt the sharp lashes of economic discipline that invariably reach out as farming becomes a business rather than a way of life.

The economic high-water mark for American agriculture came in the decade of 1909 and 1918, buoyed by a booming U.S. economy during the buildup to World War I. Prices of agricultural commodities rose to levels that have not since been equaled in terms of buying power for farmers. Total farm numbers had leveled out during the 1890s as early mechanization, the forerunner of industrialization, had allowed each farmer to farm more land. Larger farms added to farm prosperity during this Golden Era in American agriculture.

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Higher prices and continued mechanization again led to surplus production. Chronic overproduction coupled with the post-war economic recession of 1920-21 heralded the beginning of two decades of depressed commodity prices and farm incomes. The Dustbowl of the Great Plains and the consequent western agricultural migration are parts of the sad legacy of this era. The average farm size in 1920 was still only 140 acres with farmers making up 27% of the labor force. Total number of farms in the U.S. peaked at nearly 6.5 million during in the 1920s and remained stable during the Great Depression of the 1930s. It took the wartime economy of the 1940s to return the American farmer to a position of economic respectability. However, farming has never returned to its prior status as a desirable way of life. Agriculture emerged from World War II as a business, on its way to becoming an industry.

Many people associate industrialization with the transition from an agrarian to manufacturing economy. However, industrialization is more accurately defined as a mental model or paradigm for organizing and managing resources – land, labor, and capital. The basic motivation for industrialization is economic efficiency. The basic strategies are specialization, standardization, and consolidation of control. Specialization facilitates division of labor – each person doing fewer things better. Specialized functions then must be standardized so that each contributes its part to a coherent whole. The standardized functions can then be simplified and routinized, allowing control to be consolidated into larger, more efficient production units. In a competitive market economy, profits provide the motivation for the relentless pursuit of ever greater economic efficiency. Industrialization allowed farmers to specialize in food production, freeing others to specialize in manufacturing the other things associated with a modern, industrial society.

Chemical technologies developed during World War II facilitated the industrialization of agriculture. Cheap nitrogen fertilizers and pesticides encouraged farmers to abandon crop rotations and diversified crop and livestock farming as means of managing pests and maintaining soil fertility. The Land Grant University system, created by various Acts of Congress between 1862 and 1914, shifted from its pre-war focus on empowering farm families with education and information to developing and transferring industrial technologies. The USDA shifted from its public service mission of providing food security through viable family farms to food security through agricultural productivity and efficiency. Farms powered by horses and solar energy gave way to farms powered by tractors and fossil energy. Farms were being transformed into factories without roofs and fields and feedlots into biological assembly lines.

Capital and technology replaced labor and management as farms were consolidated into larger and fewer farm businesses. By the 1970s, farm numbers had dropped by more than one-half from their peak, leaving only 2.8 million farms. The surviving farms averaged 390 acres, nearly three times as large as in the 1920s and employed less than 5% of the workforce, compared to more than 25% in the 1920s. Agriculture was ripe for the economic euphoria that arose from expanding global markets during the 1970s. At the advice of Secretary of Agriculture Earl Butz, farmers planted fencerow-to-fencerow and then tore out the fencerows, windbreaks, and anything else that stood in the way of industrial farming.

The agricultural experts failed to anticipate the global economic recession of the 1980s, which dried up export markets and caused commodity prices to plunge. Farmers were caught

with large debts at record high interest rates with prices too low to cover their financial commitments. American agriculture was confronted with the “farm financial crisis of the 1980s,” as it is still called among those who remember the agony of rural America at that time. Roughly one-fourth of the remaining farms went out of business during that decade. Farm numbers fell to around 2 million and have since remained at that general level. However, the agricultural transformation of the 1980s was far more profound than indicated by the drop in farm numbers. The survivors were mostly smaller family farms on which farming had remained a way of life and the large specialized farm businesses that had prospered during the 1970s. Those who suffered most were on mid-sized, full-time family farms who had decided too late to expand into larger, specialized bottom-line farm businesses.

There will never be another farm financial crisis like the 1980s. The large, specialized operations have continued to grow larger, but most important, are increasingly controlled by large, multi-national agribusiness corporations. Corporate contracts promise economic security by protecting farmers from the vagaries of open markets. The corporations typically don't own farms or feedlots, but they can control the production process through comprehensive contracts. Contractual arrangements range from specifying a selling price or use of a specific herbicide to controlling virtually every aspect of the production and marketing process. The percentage of agricultural commodities produced under comprehensive contracts was estimated by USDA at 41% in 2005, up from 31% in 1993. An earlier estimate placed production under all types of contracts at 63% in 1997. Considering the prevalence of contract livestock and poultry production and genetically modified corn and soybeans covered by licensing agreements, the percentage of production under some form of corporate contract is likely more than 80% today.

The objective of contract production is coordinated control of the food system. When few enough corporations control enough production to stabilize production on the backs of their contract growers, they can ensure consistent profits for their stockholders. As of 2007, four corporations controlled 84% of the beef packer market; four corporations controlled 66% of the pork packer market; four corporations controlled 59% of the broiler market. The turkey, flour milling, seed, and other agricultural markets were similarly concentrated. Once these firms have a large percentage of their raw material needs under contract, they are in a position to manipulate the remaining open markets to their advantage. They essentially have control of the agricultural economy. Once-independent farmers become nothing more than contract workers for the corporate food industry.

Corporatization of the food system is no longer being driven by profits gained through greater economic efficiency. The economic efficiencies of large scale farming operations were probably exhausted by the 1950s and even earlier in most non-farm sectors of the food economy. The motives of further corporate consolidation are market power and political power. Market power can be used to extract profits by exploiting both consumers and producers. Consumers' food choices can be limited to maximize sales of the most profitable products. Contract growers can be pressured to minimize production costs through production practices that degrade the land and natural environment and diminish the quality of life in rural communities.

Real farmers are real people, they have social and ethical values which they can affect every decision they make, even if they function through family corporations. Corporations are not real

people; they have no ethical or social values. The only common value shared by stockholders in large publicly traded corporations is the desire to enhance the value of their investments. The corporatization of American agriculture has left us with a food system that no longer functions to provide safe, wholesome, nutritious food for people. It functions to maximize the short run economic benefits of corporate managers and global shareholders. The most costly consequence may be declining physical health and rising costs of health care, both of which undermine the future of our nation.

Contrary to popular opinion, the corporatization of the American food system is not being driven by the impersonal forces of a free market economy. First, the conditions necessary for markets to reflect the actual food preferences of consumers no longer exist. If a market is to function for the collective good, there must be so many buyers and sellers that any buyer or seller could go out of business or double production with no noticeable effect on product availability or price. In such markets, economic benefits are passed on to consumers because sellers have no ability to retain excess profits for stockholders. It is also relative easy for new sellers to bring new products into such markets; thus sellers are not able to limit the variety of products available to their customers. Food markets in the U.S. have not been free markets for decades. For example, the Packers Consent Decree of 1920 was an effort to break up a “monopoly” in meat packing. The concentration of market power in meat packing today is far greater than in 1920.

Economists excuse corporate consolidation in the food industry today by claiming it is necessary to achieve the economic efficiencies of large scale production. Admittedly, corporatist economies produce lots of “cheap stuff,” but we have no assurance they are producing the “right stuff.” The corporate food system today produces a lot of cheap food, but there is nothing to ensure it is producing the foods consumers actually prefer or need for their health or well-being.

Capitalist economies have a natural tendency to evolve toward concentration of economic power. Thus, a primary economic function of government in capitalist countries is to maintain the competitiveness of markets, to ensure that markets bring forth the right stuff for the good of society. The U.S. government has not only failed to maintain free markets, it has actually promoted the industrialization of agriculture and the consequent corporate consolidation of the food system. The 6.5 million farmers of the 1920s were probably more than was consistent with efficient food production. Many who left their farms found better, more productive lives elsewhere. In addition, many of the technological advances in agriculture since World War II pose no risk to the natural environment, human health, or the long run food security of the nations. No one is suggesting that Americans would be better off going back to the days of hoes and horses when a quarter of the workforce was employed in farming.

However, industrial technologies such as reliance on chemical fertilizers and pesticides, feeding of antibiotics and growth hormones, concentrated animal feeding operations, and genetically modified crops have raised serious public concerns about the environmental, social, and public health impacts of industrial agriculture. A growing body of scientific evidence suggests our corporatist food system is offering us foods that are rich in calories and poor in nutrients, thus leading to an increasing unhealthy nation. In addition, reliance on nonrenewable fossil energy, particularly for nitrogen fertilizers, also raises serious questions of long run food security of the nation. With growing corporate influence, government officials seem to lack the

political will to even question the integrity to our food system, let alone bring about the transformation needed to ensure the long run health and well-being of the nation.

We know how to produce enough food to feed the American people with natural, organic, local, sustainable food systems. These alternative systems pose few if any of the ecological, social, or public health risks of industrial foods. With a sustainable food system, farming might employ as much as 5% of the U.S. workforce, because it would require more, smaller real farms to replace fewer, larger farm businesses. A new alternative food system has already emerged and is growing rapidly among those who intuitively understand that something is fundamentally wrong with the American food system. The future rate of progress, and perhaps its survival, depends on the willingness of our elected representatives and government officials to break the corporate strangle hold on the American food system.

Evidence of political influence on U.S. farm policy is abundant and pervasive. Political contributions from agribusiness amounted to more than \$65 million during the federal election cycle of 2008, going to candidates of both parties. The top contributors were corporations involved in production and processing of sugar, tobacco, and dairy products, all of which are heavily dependent on government farm programs. The top contributors by category were: agricultural services and products: \$9.7 million; food processing and sales: \$7.4 million; crop production and basic processing: \$6.0 million, tobacco: \$4.8 million, and forestry/forestry products: \$3.4 million. Not surprisingly, the top recipient of agribusiness lobby money among House candidates was Colin Peterson, Democrat from Minnesota, Chair of House Agriculture Committee. Blanche Lincoln, Republican from Arkansas, ranking member of the Senate Agriculture Committee, was the top recipient among Senate candidates.

Campaign contributions represent only the tip of the iceberg of corporate influence of agricultural policy. Monsanto, who holds the patents on about 80% of all genetically modified seeds, spent almost \$9 million lobbying during 2009, an off-election year for national politics. ADM, a giant grain company also involved in ethanol production, chipped in another \$1.2 million. Cargill, another multi-national grain company came up with \$1.7 million. Lobbying is an everyday business, and a big business for agribusiness, in Washington, DC.

Corporations are not limited to for-profit businesses. The essence of corporatism is the separation of decision making from the personal responsibilities of ownership or membership. The corporate organization defines its success in terms of its specific mandate or mission. Survival and growth of the organization is a prerequisite for success and thus becomes the top priority of management. Many political action groups, including labor unions and environmental organizations, are corporate in the sense that their lobbyist may or may not accurately represent the core values of their individual members. The American Farm Bureau Federation, one of the most powerful lobbyists in DC, is a prime example of an organization that clearly misrepresents the basic values of its membership when it claims to speak for agriculture. In fact, a large portion of its members are urban residents who become members by virtue of taking out Farm Bureau insurance policies.

In addition to general farm organizations such as the Farm Bureau and Farmers Union, very major agricultural commodity – corn, soybeans, cotton, rice, beef, pork, poultry, dairy – is

represented by a lobbying organization that claims to represent the interest of its respective producers. The American Farm Bureau Federation reported spending \$4.5 million per year during the debates leading up to the 2001 farm bill while the National Cotton Council chipped in a mere \$300 thousand. The Sugar Association spent more than \$4.5 million during 2007 and 2008, to influence the latest farm bill. The National Corn Growers spend about a half-million in 2009, lobbying for an extension of corn ethanol subsidies. It is virtually impossible to come up with any meaningful estimate of the political influence of such groups, as they all have politically active state level organizations that support their national organizations. Restraints on corporate lobbying at state and local levels are practically nonexistent. The producers of the commodities represented by these various lobbying groups are simply too diverse – politically, economically, socially – to share any common core values, other than the desire to make a living or prosper economically.

In addition, some of the most blatant conflicts of interest occur among politicians and bureaucrats who serve in important policy and administrative positions. This is particularly problematic at state and local levels. Seats on agricultural committees in legislatures of major agricultural states are routinely filled by those with clear economic interests in agriculture. Those few who are not farmers are expected to defer to the agricultural experts, meaning those with an economic interest in agriculture. In some states, such as Missouri, no piece of legislation passes out of committee to the floor of the legislature unless it has first been approved by lobbyists for Missouri Farm Bureau and Mo-Ag Industries – the agribusiness lobby. In such states, urban legislators never have an opportunity to vote on legislation that might challenge the industrialization or corporate control of their food system.

As a consequence of corporatization, politicians quite naturally put the economic interests of corporate lobbyists ahead of the public interests of their constituents and society in general. Of course they have to be concerned about reelection, but a well-financed campaign can paper over a host of subtle betrayals of public trust. It has become accepted practice to measure the success of politicians by the amount of government money they bring back to their state or district, not by their advocacy for the greater public interest. Agricultural lobbying organizations likewise measure their success in terms of the government subsidies they bring home to their members, not by their advocacy for an agriculture that serves the larger public interest. Corporate influence over agricultural policy may not be any greater than other sectors of the economy, but it certainly has the reputation for not being any less.

Government farm subsidies obviously are not all allocated among farmers with any sense of equity or justice. USDA statistics for 1995 to 2009 indicate that 74% of total government payments go to the largest 10% of recipients, in general, to those with the largest farming operations. The 80% of recipients receiving the smallest government checks received only 12% of the total government money distributed through the USDA. During 2009, nearly 40% of U.S. farmers received no government payments at all. Payments were not directly proportional to production because some commodities are subsidized more heavily than others. More than 76% of all farm subsidies went to producers of five crops: corn, wheat, cotton, rice, and soybeans. It's as if the citizens of the country were bushels of corn, soybean, wheat, or rice rather than the people who owned the land, tended the crops, and eat the food – one bushel, one vote. Apples were the only fruit or vegetable crop that ranked among the top twenty in subsidies.

More than half of all government farm subsidies went to ten states: Texas, Iowa, Illinois, Kansas, Minnesota, North Dakota, Nebraska, California, South Dakota, and Missouri. During 2009, 60% of farm subsidies went to states represented by senators serving on the Senate Agriculture committee and 37% of subsidies went to states represented on the House Agriculture Committee. Four of the top five congressional districts receiving agricultural subsidies were states represented on the House Agriculture Committee. This distribution of subsidies is far more consistent with the economic and political power of special interest groups than the food security of the nation.

There can be little doubt that government farm policies have played a significant role in limiting the variety of products offered to American consumers, thus shaping the modern American diet. Since the 1970s, the number of total calories in the average American diet has tended persistently upward. This followed several decades of falling or stable levels of calorie consumption per person. The consequence is the well-publicized expansion of the American waistline, with alarming increases in numbers of Americans who are overweight or obese.

Increases in per capita consumption of simple carbohydrates and fats seem to be the most likely drivers of the persistent trend toward greater overconsumption of calories. Between 1980 and 2004, total daily calories per capita increased by 21%. Calories from fats increased 22%, calories from carbohydrates increased 19%, while calories from proteins increased by only 16%. Whole milk consumption has actually declined in the face of competition from low fat milk and soft drinks. Cheese consumption, a common source of protein and fat, trended upward. The only other animal protein to post significant increases was chicken, with beef losing market share and pork just holding its own. Any increase in fat consumption associated with meats was probably in the vegetable oil used to cook chicken nuggets or other similar fast food products.

Product derived from corn and soybeans, the two most highly subsidized crops, stood out as major contributors to higher calorie diets. High-fructose corn syrup has replaced cane and beet sugar as the sweetener of choice, in spite of the best efforts of a well-financed sugar lobby. Increased consumption of carbonated beverages has meant increased consumption of high-fructose corn syrup. Corn sweeteners have also replaced cane and beet sugar in many other products. Soybean oil has replaced lard and butter as the fat of choice, finding a growth market in the deep fryers of the fast food industry. In fact a significant portion of increased calorie consumption may be a result of increased spending for food eaten away from home relative to food prepared at home. Fast food franchises seem to thrive economically by selling large portions of foods high in sweets, fats, and salt.

Trends in fruit and vegetable consumption, important sources of vitamins and minerals, have been basically flat over the past 30 years, with intermittent blips and minor year to year variations. More than 40% of Americans eat no fruits or vegetables on any given day and per capita consumption persists at levels well below those recommended for good health. Going all the way back to 1919, per capita fruit consumption has essentially doubled, but the total increase has been in canned, frozen, and other processed fruits. Over the same period, commercial vegetable production has increased by roughly one-third, with the increase accounted for entirely by vegetables other than potatoes. The most dramatic drop in vegetable consumption has been

for vegetables consumed from home gardens. Home gardens accounted for about one-fourth of per capita vegetable consumption in 1919 but today account for less than 3%. The decrease in vegetable from home gardens has more than offset the increase in commercial consumption. Perhaps the change in nutritional quality of vegetables over time is more significant than the change in quantity.

Prices of fruit and vegetable increased by 75% between 1989 and 2005, compared with a 61% increase in the overall consumer price index for all foods prepared at home, which may have limited their consumption. Prices of fruits and vegetables increased even more sharply in relation to major sources of carbohydrates and fats. During the same time period, prices of fats and oils dropped by 27% and sugar/sweet dropped by 33%. Fruits and vegetables have become an increasingly expensive source of calories, as they are not nearly as calorie-dense as are fats and sweets. Products manufactured from crops receiving the highest government subsidies obviously have experienced increased consumption and lower prices in relation to fruits and vegetables, which have receive far fewer subsidies. However, it's not likely that subsidizing fruits and vegetables would solve the nutrition problem, if the subsidies simply promote further industrialization as a means of lowering costs of production.

It's important to remember that the increase in daily calorie consumption has occurred for carbohydrates, fats, and proteins. In addition, while consumption of fruits and vegetables has not risen appreciably, neither has there been a sharp decline. In fact, consumption of *fresh* fruits and vegetables has risen significantly since the early 1980s. Americans are consuming more calories from a wide variety of sources; the increases in calories from calorie-dense foods are just greater than from nutrient-dense foods, such as fruits and vegetables.

The most likely source of America's diet/health problem is likely the industrial, corporate food system in general. The pattern of increases in calorie consumption among different food groups may well be influenced by farm policies. However, farm policies have been developed and implemented under growing corporate influence of agribusiness and agricultural lobbyists that support the continued industrialization of agriculture. In addition, government subsidies are but the tip of the iceberg of government support for agricultural industrialization. Every significant USDA program implemented since the 1940s, including agricultural research and education in the Land Grant University system, in one way or another has facilitated the industrialization of American agriculture.

Corn, soybeans, wheat, rice, cotton and the other government program crops fit the industrial model of production best. Government price supports and subsidized crop insurance have removed much of the price volatility and production uncertainty that stood in the way of specialization. Government grades and specifications have resulted in standardization, which facilitated consolidation of control. Subsidized corn and soybeans provide the relatively, low-cost sources of feed needed to facilitate the consolidation of livestock, poultry, and dairy operations into large concentrated animal factories. Total production of both corn and soybeans has more than doubled since the 1970s. Corn production during 2009 reached more than 13 billion bushels while soybean production topped 3 billion bushels. Large scale production of raw materials facilitated corporate control of the food chain through vertical integration through comprehensive contractual arrangements.

Commercial fruits and vegetables are produced in similarly large, corporately controlled production systems. However, the perishability and time-sensitivity of quality of fresh fruits and vegetables – in harvesting, storage, and shelf-life – has hampered their industrialization. Perhaps this, as much as farm policy, accounts for the lack of ability of fruits and vegetable producers to keep production costs in line with costs of corn sweeteners and soy oil. While overcoming these obstacles through industrial technologies might bring down the costs of fruits and vegetables, the increase in consumption might be largely offset by declines in nutritional quality. The seemingly endless variety of food choices available in mainstream supermarkets today are virtually all industrially produced foods selected by a corporately controlled food system, quite logically because they are profitable, not because they are nutritious.

These trends have not gone unnoticed by many discriminating American consumers. The booming local food movement today is a direct response to the lack of real food choices in today's supermarkets and franchise restaurants. If you ask a *locavore* why they prefer local foods they will probably mention freshness and flavor. Industrial food is simply not compatible with freshness and flavor – local is. However, the local food movement is about far more. Its cultural and ethical roots are reflected in the Slow Food movement, a worldwide organization with about 85,000 members in over 100 countries. Their website states, “We believe that the food we eat should taste good; that it should be produced in a clean way that does not harm the environment, animal welfare or our health; that food producers should receive fair compensation for their work, and that all people should have access to good clean food.” *Good, clean, and fair* are becoming the watchwords of the local foods movement.

The local food movement has its roots in the natural food movement of the 1960s, which began when the “back to the earth” people dropped out of the American mainstream. Rachel Carson's 1962 book, *Silent Spring*, awakened public awareness to the environmental risks of agricultural pesticides. The “back to earth” people responded by producing their own *organic* food, buying food at farmers markets, and establishing the first cooperatively owned and operated natural food stores. They knew how their food was produced because they knew where it was produced and they often knew personally the person who grew it. To these early natural food advocates, *organic* was as much a way of life as a way to grow good, healthy food. It was a rejection of the industrialization of American society. The natural food movement spread far beyond the “hippie” communities during the 1970s and 1980s, as more people became aware of the health and environmental risks associated with industrial agriculture and began to lose faith in an increasingly corporately controlled U.S. food system.

The growing market for natural foods laid the foundation for a booming market in organic foods during the 1990s. By the early '90s, growing public concerns about nutritional health and food safety had fueled dramatic growth in the market for natural foods. Relationships between consumers and farmers became less direct and personal as natural foods retailers took a larger share of the natural foods market from farmers markets and roadside stands. Fewer consumers then knew the farmers who grew their food so they needed some other means of knowing that their food was grown naturally.

Certification of *organic* foods by a third party was a means of assuring consumers that legitimate standards for *natural* food production had been followed. Organic farmers across the U.S. formed organizations to define organic standards and to inspect organic farms to verify compliance. Organic certification allowed producers to gain access to even more distant markets, as farmers and consumers began to rely on certification rather than personal relationships. During the decade of the '90s, organic foods grew an average rate of 20% per year, doubling every three to four years.

Prospects for large profits from the rapidly growing organic food market eventually attracted the attention of the large mainstream food corporations. No other segment of the food market was growing as fast as organics. Whole Foods had become the fastest growing food chain in the U.S. by consolidating natural food cooperatives and building new stores to sell natural/organic foods. The mainstream supermarkets, such as Kroger and Safeway, added lines of organic foods and began promoting organic foods in their ads. As the share of organic foods marketed by mainstream supermarkets grew, the market share left for the smaller independent natural foods stores and co-ops obviously fell. The share of the organic market held by *independent* natural foods and health foods stores fell from 62% in 1998 to 31% in 2003.

The large corporate food retailers, and the large food processors who supplied them, found it difficult to deal with large numbers of small farms, particularly with the diversity of organic standards and certification programs that existed among different groups of farmers in different regions of the country. They encouraged organic farmers to adopt uniform *national* standards for organic certification so they could assemble the large quantities of organic products necessary to supply their stores. Organic farmers were led to believe that uniform national standards would give them greater access to these mainstream food markets and most organic farmers had supported it. In 2002, the USDA launched its National Organic Program (NOP) for certification of organic foods.

On the surface, standardization of organics seemed to be a good idea. However, uniform national standards actually facilitated the ongoing industrialization of organic food production and distribution – the specialization, standardization, and consolidation of control needed to accommodate the mainstream food system. With greater standardization, organic producers could continue to specialize and consolidate into even larger scale operations. The door was opened for industrialization of organics.

Organic production was no longer defined by the farmer's commitment to natural systems of production that maintained the organic matter and natural regenerative capacity of the soil, but by a set of written rules regarding allowable and non-allowable inputs and production practices. Large producers typically could meet these *minimum* requirements at lower costs than could the philosophically committed organic farmers. Larger producers also could produce the large quantities of organic products demanded by the mainstream corporate supermarkets and could ship truckloads or shipping containers of organic produce across nations or around the world. The industrialization of organics left smaller independent organic farmers and smaller natural foods stores struggling for their economic survival.

However, many discriminating “natural foods” consumers were already moving beyond organic to *local*. They didn't trust either the corporate food system or the government to maintain the ecological and social integrity of organic foods. Many people in the new food movement wanted something more than certified organic; they wanted to buy their foods locally from people they knew and trusted. A number of surveys over the past few years have indicated that roughly three-fourths of American consumers have a strong preference for local foods. *Local* is becoming the *new organic*.

Many organic farmers who market directly to their customers through farmers markets, roadside markets, or CSAs chose not to become certified as organic, but instead to rely on personal relationships with their customers to validate the integrity of their products. Affirming their judgment, the number of farmers markets in the U.S. more than doubled during the decade that organic foods were moving into mainstream supermarkets. For many people, relationships are more important than convenience. They want to buy food “with a face.” They wanted to “know their food” by “knowing their farmer,” which has become the name for a new farm program within the USDA. The “*know your farmer, know your food*” program is no doubt greatly appreciated among those producing for organic and local markets. However, there is no allocation of funds within USDA targeted specifically to this program. The intent is to reorient a range of different programs within USDA to support production and marketing of locally grown foods. However, the \$20 billion-plus budgeted for commodity subsidizes is more than double the amount budgeted for all other agricultural programs combined.

Substantive changes in U.S. farm policy will not come from adding a few new programs to pacify increasingly disgruntled agricultural constituencies. The political grip of corporate agribusiness and industrial agriculture is simply too strong. Real change will require a consumer and taxpayer revolt. While most political wonks think such a revolution is highly unlikely, all it would take to spark it would be for consumers and taxpayers to understand how their tax dollars are being spent. Our government programs are supporting multinational corporations, not independent family farmers. As a consequence we are subsidizing the destruction of the natural environment, the diminution of public health, and threatening the long run food security of the nation. The first real step toward true policy reform must be elimination of the commodity-based programs that facilitate the industrialization of agriculture.

The alternative food movement can succeed without government support; it will just be more difficult and will take longer. The movement today is at a new frontier. Growing concerns about health and nutrition promises to be the new driver of the organic/local foods movement. A growing number of scientific studies are verifying that significant declines in the basic nutritive value of foods have occurred during the period of agricultural industrialization. The American epidemics of obesity, diabetes, and heart disease are all obviously related to diet. It's easy to blame these maladies on the sedentary, but high-stress, American lifestyle, which might well be a significant factor. But an equally if not more important factor could be that many of today's foods are simply lacking in nutrients.

Americas are the most overweight people in the world. According to the Center for Disease Control and Prevention, adult obesity has increased by 60% within the past twenty years. Trends for childhood obesity are even worse, having *doubled* for children and *tripled* for adolescents

during the same time. One-third of American adults are now considered severely overweight or obese. Obesity is closely linked with other health problems, particularly diabetes and heart disease, and ranks second only to tobacco smoking as a cause of adult death. Americans are the most overfed yet undernourished people in the world. The epidemic of obesity is obviously related to the American diet.

The evidence continues to grow that as food has become more abundant in terms of calories it has become more deficient in terms of nutrients. For example, problems of obesity and diabetes are more common among people with lower incomes who logically tend to seek foods providing the cheapest source of energy – meaning the most calories for the fewest dollars. Because of time constraints, many such people also rely heavily on highly processed and ready-to-eat foods, including “fast foods.” On such diets, people might easily end up eating far more calories than they need without getting enough nutrition to meet the minimum requirements of a healthy diet.

When livestock are offered a wide variety of foodstuffs containing a variety of vitamins, minerals, and other nutrients, most will naturally select a healthy balanced diet. Some animal scientists contend that animals in today's feed lots have lost this ability. When animals raised under more natural conditions are offered a premixed feed containing fixed quantities of the same nutrients, they tend to consume more of some nutrients than they need, apparently trying to meet their minimum requirements of others. If we humans have this same basic tendency, whenever our food choices are limited we will tend to consume more of some nutrients than we need because we are not getting enough of others. In other words, a lack of nutrient balance in our diets would leave us hungry, even though we are consuming far more calories than is consistent with good health. Or like feedlot animals, maybe food-like substances, chemical residues, or additives distort or destroy our body's ability to select a healthy diet. Regardless, many Americans may be obese, sedentary, and stressed out because they are literally starving for nutritional substance in their foods.

One prominent academic study compared nutrient levels in 43 garden crops in 1999 with levels documented in benchmark nutrient studies conducted by USDA in 1950. The scientists found declines in median concentrations of six important nutrients: protein –6%, calcium –16%, phosphorus –9%, iron –15%, riboflavin –38%, and vitamin C –2%. Another study published in the *Journal of Applied Nutrition* in 1993 showed nutritional deficiencies for conventional foods relative to organic foods. Organically grown apples, potatoes, pears, wheat, and sweet corn, purchased over a two-year period, averaged 63% higher in calcium, 73% higher in iron, 118% higher in magnesium, 91% higher in phosphorus, 125% higher in potassium, and 60% higher in zinc than conventional foods purchased at the same time.

Other studies have shown that yield-enhancing technologies – fertilizers, pesticides, plant density, and irrigation – reduce the nutrient content of field crops by amounts generally consistent with the results for the 50-year nutrient declines and differences between conventional and organic crops. These results should come as no surprise to anyone who understands that industrial agriculture drives profits primarily from *quantity* factors: acres farmed, head produced, yields per acre, rates of gain, and the cost efficiency of large-scale production. *Quality* factors

affecting prices typically are incidental to profits and are often associated with cosmetic appearance rather than nutrition.

Advocates of industrial agriculture are quick to point out that other studies have found no difference in nutrient value between organic and conventionally grown foods. However, foods can be certified as organic after only three years of following organic farming practices, including elimination of chemical pesticides and fertilizers. It can take many years to restore the nutrient balance and natural fertility of soils needed to grow healthy, organic crops. Currently, most certified organic farms are still in the early years of transition to true organic. Regardless, this line of inquiry would appear to be potentially fertile ground for continuing research into questions of food quality and nutrition. But we don't need a mountain of evidence to conclude that food quality has been compromised in the pursuit of greater efficiency through industrial production practices.

The food processing and distribution industry also must share the blame. The corporations that market our foods are concerned about profits – not diet or health. In fact, the managers of the multinational corporations that currently control the American food system have a legal fiduciary responsibility to serve the common interests of their stockholders, meaning to maximize returns on their investments. They have no social or ethical commitment to protecting public health and instead do only those things required by law. Current laws are clearly inadequate to protect the public from diet related illnesses, as is evident in current trends in the diets and health of Americans.

Many people seem willing to believe the American diet is simply a reflection of our free market economy – consumers making informed choices concerning what they want and need to eat. However, today's food markets are not free markets, at least not in the sense that ensures they function for the public good. For food markets to function effectively, consumers must understand the ultimate consequence of their food choices. They must have accurate information. Nutrition labeling is a start, but consumers must also understand the relationship between the information on the label and their physical health and the long run health of our society. Consumers' choices must also be made freely, without coercion, persuasion, or other manipulative pressures. In economics, the consumer is sovereign; untainted by outside influences. Obviously, neither of the prerequisites for free markets exists in today's food markets. Consumers are misled, by misinformation and lack of information, to make choices that yield profits for corporate investors, regardless of their consequences for public health.

Food industry marketers know that humans have a natural taste preference, probably a genetic predisposition, for foods that are high in fat and sugar. Preferences essential for the survival and health of our primitive ancestors are used to mislead us into eating foods that threaten our health. Regardless, it's easier to market foods that are higher in calories, particularly when those foods are cheaper to produce. The primary sources of those cheap calories are plants and animals from farms using modern yield-enhancing technologies and thus lacking in nutrient density and encouraging over-consumption while enhancing food industry profits.

Americans increasingly are rebelling against the corporate industrialization of their food systems by seeking out local sources of foods. They are looking for healthier foods by meeting

more of their food needs locally. There are many other environmental and social factors driving the local foods movement and the emphasis placed on health in this paper is not meant to diminish the importance of these other factors. People are looking for local farmers they can trust to produce *good, clean* food, and are willing to pay a *fair* price for their efforts – good, clean, fair food.

People tend to underestimate the importance of the local food movement because they associate local with home farmers markets and community supported agricultural organizations or CSAs, and more recently, home and community gardens. While farmers markets and CSAs have been growing rapidly, they still account for a very small portion of total food sales. The number of home vegetable gardens also exploded after the sharp run up in food prices during 2008 – including one at the White House. While farmers markets, CSAs, and gardens are and will continue to be important, the local food movement is probably most accurately defined by the growing number of retail food stores and institutional food buyers who are committed to sourcing as much food as possible from local growers.

For example, Good Natured Family Farms is an “alliance of more than 100 family farms, some are 3rd or 4th generation, who raise our animals humanely and care for the earth in a sustainable fashion. We have banded together to be able to bring our foods to Hen House Markets and Ball's Price Chopper Supermarkets, and the Community Mercantile in Lawrence, Kansas.”ⁱ The alliance began by supplying high quality beef to Hen House Markets, a 13-store supermarket chain operated by Ball Foods Inc., a family corporation with a long history in Kansas City. Good Natured Family Farms (GNFF) fits in well with Ball Foods' commitment to maintaining its local connections.

GNFF has developed an expanding line of branded food products, which now includes beef, chicken, eggs, honey, cheese, and milk, with other products in various stages of development. As GNFF states on their website, “We have three goals: Support local farmers by providing them with a market for the food they raise, provide our customers with fresh, natural foods raised humanely, without hormones or sub-therapeutic antibiotics, and raise our beef, chicken, eggs, and milk in a manner which protects and conserves the precious resources upon which they rely.” In 2008, GNFF products marketed through Hen House Markets totaled more than \$10 million.

New Seasons Market operates nine food supermarkets in the Portland, Oregon area. As Brian Rohter, co-founder and president, explains on their website, “Three families and about fifty of our friends decided in late 1999 that we wanted to create a business that we could be proud of – a company that had a true commitment to its community, to promoting sustainable agriculture, and to maintaining a progressive workplace.”

New Seasons supermarkets look pretty much like any other modern supermarket, with delis, bakeries, and other amenities American food shoppers have come to expect. Once inside the store, the most noticeable difference is that virtually every item in the store is labeled with respect to origin and there is an “organic” option for nearly every food item. Also, many of the food products originate pretty close to Portland with labels often including the names of the farmers. New Seasons also has a full-time person whose sole responsibility to serve as a liaison

with their local farmer-suppliers. As they say on their website, “Locally owned and operated means being an active and committed participant in the community; because our kids go to school with your kids. Locally owned and operated means buying from small vendors and supporting the development of our regional food economy. Locally owned and operated means being in touch with our customers.”ⁱⁱ

The local food movement is also finding its way into institutional markets – schools, hospitals, extended care facilities, etc. – in addition to supermarkets and restaurants. The most impressive progress thus far seems to have been made in getting sustainably produced local foods into public schools. For example, more than 500 public school districts and 95 colleges and universities currently have active programs to provide U.S. students with locally grown foods.ⁱⁱⁱ

Supermarkets and institutional markets will continue to be important. However, the food systems of the future may more closely resemble today's multi-farm CSAs. *Grown Locally*,^{iv} *Idaho's Bounty*,^v and *the Oklahoma Food Cooperative*,^{vi} for example, are cooperative organizations of farmers that offer a variety of vegetables, fruits, meats, eggs, cheese, baked goods, flowers, and herbs produced by local farmers. Many items are available as CSA shares, standing orders, or for week-by-week purchase. Customers may have the option of on-farm pick-up, local delivery points, or delivery to the door for an added charge. Websites allow producers to post what they have available each week, ensuring that products sold are available for delivery and allowing customers to place or revise their orders on the website.

Prices of organic/local/sustainable food will drop in relation to conventional foods as more efficient processing and distribution infrastructure is put in place to accommodate the new alternative food systems. However, it will always be cheaper, in a purely economic sense, to extract and exploit than to renew and regenerate. In other words, foods that reflect the ecological and social costs of production will always cost more than those that don't.

So what does this mean about the affordability of really good food? The average American family spends only about a dime out of each dollar of disposable income for food. So, spending ten or even twenty percent more for *good* food only requires spending one or two percent more of the typical family's income for food, rather than for some other discretionary budget item. In some cases, good food may not require actually giving up anything else. For example, the average American family today spends nearly twenty percent of their income for health care. As we learn more about the linkages of diet with health, it's becoming evident that spending a bit more for good food could result in spending a lot less for healthcare.

However, people living in poverty don't have discretionary income. Many can't afford either good food or adequate healthcare. Admittedly, for people living in poverty, choosing good food is more of a challenge. Some poor people may spend up to half of their income for food. For these people, spending another ten to twenty percent for food would require five to ten percent more income, since they can't take it from anywhere else in their budget. But, the challenge can be met.

On average, more than 80% of food costs in the U.S. are paid for processing, packaging, transportation, advertising, and other things that make food more convenient or attractive. While not everyone might be able to afford the convenience and cosmetics, even those with the lowest incomes could afford the food, particularly with our existing food assistance programs. They would simply have to buy raw or minimally processed foods in season and prepare those foods for themselves. However, people with low-incomes do not have the freedom to choose good food because they don't have access to good, locally produced food, nor do most have the knowledge or ability needed to process, prepare, and store their own foods.

Many low-income people could actually save money by buying high quality, fresh foods from local farmers and preparing more meals from scratch. Those who don't feel they have enough time to prepare their own food need to understand that more time spent with family members preparing, processing, storing, and eating good local food can reduce costs of family health care and unnecessary recreational distractions and can add to the overall quality of family life. To eliminate hunger, we must care enough about poor people to help them learn to choose healthier lifestyles, rather than just provide them with cheap food.

Making natural/organic/local/sustainable food affordable to all may seem a bit idealistic, at least at first. However, only fifty years ago, most food in America was locally grown. Construction on the interstate highway system had just begun and supermarkets and franchise restaurants were just beginning to catch on. By the 1960s, supermarket chains had replaced the local “mom and pop” grocers, by the 1970s, fast food franchises were “freeing housewives from their kitchens” and by the 1990s, industrial agribusinesses had replaced family farms as the nation's major food producers. In the 2000s, the American food system is being transformed from national to global. All of this happened in only fifty years.

In an ever-changing world, it seems logical to assume that changes in the food system over the next fifty years will be at least as great as in the past fifty years. With growing threats to ecological, social, and economic sustainability, it seems likely that future changes will be in a direction fundamentally different from those of the past. The evolution of the natural, organic, and local food movements reflects a growing demand for fundamental change in the way food is produced, processed, and distributed. This new food system is at least as advanced today as the industrial food economy was fifty years ago. There is every reason to expect the new food system to continue to grow until it becomes the new mainstream food system of America.

ⁱ *Good Natured Family Farms* <<http://www.goodnatured.net>>

ⁱⁱ *New Seasons Market*, <<http://www.newseasonsmarket.com>>

ⁱⁱⁱ For more information see, <<http://www.farmtoschool.org>> and <<http://farmtocollege.org>> and for case studies, see *Agriculture of the Middle*, <http://www.agofthemiddle.org/archives/2004/09/case_studies.html>

^{iv} Visit the *Grown Locally* website at <<http://www.grownlocally.com>>

^v Visit the *Idaho's Bounty* website at < <http://www.idahosbounty.org/> >

^{vi} Visit the *Oklahoma Food Cooperative* website at < <http://www.oklahomafood.coop/> >