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Planning for the local food system in the United States

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Abstract

To improve local food systems in the U.S. it is important to understand what is happening in the dominant mainstream food system, because that system poses formidable constraints to how much success local food systems can achieve. Major changes occurred in the food-system-centred part of the American landscape. The principal trends in the changes of the food system are that farmers get less of the food dollar, their numbers decrease and large farms are dominating the farming community. Accompanying changes are high pesticide use, less biodiversity in crops, more use of genetically modified organisms and booming factory farms. These trends change the rural communities and make farmland disappear from urban fringes. The consumer part is changing by the development of mega-superstores and fast-food chains. Driving forces are the increasing concentration in the mainstream food industry, horizontal and vertical integration making the concentration processes more dominant. Changes in food consumption and globalization of the market both affect the patterns in the landscape, as did the environmental movement. Local food systems are still existing, but more fragile and characterized by diversity. They cannot change the dominant food systems. A stronger planning system can help them to provide a more solid place on the market by filling in the gaps and making use of the movement towards healthy/sustainable food systems. Complementarities between the American and European experience can be noted, although differences exist as well.

Keywords: food system; globalization, rural communities; factory farms; local food systems

Introduction

This chapter will look at ways of achieving better planning of the food system in the United States (US), with the primary focus on strengthening the capacities of more fragile and vulnerable *local* food systems in the face of the overwhelming power and dominance of the market-driven, mainstream food system. Centred geographically in smaller regions and the communities within them, the target populations of local food systems are farmers within these regions, especially family farmers, and all food consumers who reside in these regions. The goal of local food systems is for all persons to have access at all times to a readily available, nutritious, safe, and sustainably produced food supply. A strong local food system would also contribute to healthier eating practices, greater food self-reliance for communities and individuals by building food resources to meet their own needs, better satisfying the

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food needs of low-income people, supporting local agriculture to develop better links between farmers and consumers, and greater community control over food issues¹.

To improve local food systems in the U.S. it is important to understand what is happening in the dominant mainstream food system, because that system poses formidable constraints to how much success local food systems can achieve. Consequently, as a backdrop to discussing improved planning for local food systems in the United States, I will first discuss major changes occurring in the food-system-centred part of the American landscape and the principal driving forces underlying these changes. Some complementarities between the American and European experience will be noted, although differences will be identified as well.

As context, consider the immense importance of the food sector to the U.S. economy². Collectively, the food sector accounted for \$998 billion or 13% of the gross domestic product of the U.S. and employed almost 23 million people or 17% of the U.S. labour force in 1996 (Hora and Tick 2001). How does this behemoth sector of the American economy affect the contemporary American landscape? What is happening on the land that produces the food, both in its natural and processed state, that Americans consume and that provides the floor for other food-chain activities to function?

Changes in food production affecting the American landscape

No one would dispute the contention that the U.S. is an enormous country. In 2000, 280 million people inhabited a land area encompassing 3.7 million square miles. More than half of that land, 57% or 2.1 million square miles, is privately owned, almost all of which is undeveloped rural property. This land is divided between rangeland (29%), forestland (29%), cropland (27%), pasture (9%), conservation reserves (3%) and miscellaneous rural uses. The cropland, where the bulk of the food is grown, is utilized for growing row crops, such as vegetables, corn and cotton, and closely grown crops such as wheat and rice (Hora and Tick 2001). Half of that cropland is used to produce food just for livestock (Gottlieb 2001)³. The importance of livestock can be seen in that 59% of total agriculture sales are for livestock, poultry and dairy products. In contrast, fruit and vegetable sales accounted for only 11% of the total (Hora and Tick 2001).

Sixty years ago, most farmers fertilized their fields with cover crops and livestock waste, all produced on their own farms. They practiced crop rotation. Food processing was minimal and was done locally (Wunder 2002). That idyllic farming setting is gone for most farmers. What's happening today? What are the major trends occurring on farmland?

- *There are fewer farms and farmers.* The number of farms in the U.S. continues to decline. In the 30-year period from 1970 to 2000, U.S. farm numbers dropped 45%, from 3.8 million to 2.1 million. As with farms, the number of farmers also continues to dwindle. From 1987 to 1997, the number of farmers declined by 15% to the point where they now represent only 2% of the country's labour force. Estimates are that by 2005 the 2 million farmers in the U.S. will shrink further to 1.45 million.
- *Farmers are getting less of the food dollar.* Paralleling the decline in the number of farms and farmers is the farmer's dwindling share of the consumer dollar, which fell from 40% in 1952 to 21% in 1997 (Hora and Tick 2001). Marketers now receive two-thirds of the profits in the food business while farmers receive only 9% (Olson 2002). In fact, some farmers are unable to survive economically

by raising food alone, so they become part-time farmers, either taking other jobs off-farm to supplement their income or merchandizing new non-farm activities on their farms (so-called hobby and tourist farms). Farming is becoming more and more of a part-time occupation, particularly for small farms. As one expert said, "Farming (or food-raising) has become a small component of agriculture" (Buttel 1990, p. 117).

- *Large farms are predominant in the farming community.* The largest farms account by far for most of the sales made in farming⁴. Consider that only 8% of all the farms in the country (157,000) accounted for almost three-fourths (72%) of total farm sales (Hora and Tick 2001). Another way to look at the dominance of the larger farms is that almost two-thirds of farm commodity sales (61%) in 1997 were captured by only 8% (163,000) of what are termed very large farms. In contrast, family sized farms (575,000) captured 30%. Low production, residential, and retirement farms (1,300,000) captured only 9% (Cochrane 1999). The largest farms received the bulk of the federal food-commodity surplus payments.⁵ Almost 30% of agriculture subsidies go to the largest 2% of farms and over 80% to the largest 30%. Fewer than 20% of support payments have gone to small farms in recent years. In 1999 the smallest farms that had gross sales under \$50,000 (76% of the total number of farms) received just 14% of support payments. The total cost of agricultural subsidies rose rapidly from \$18 billion in 1996 to \$28 billion in 2000 (Nestle 2002)⁶. The recently enacted 2002 national Farm Act increases that figure significantly, with the major subsidies continuing to go to the biggest farms.
- *Increasing numbers of farmers are working under contract.* In virtually all sectors of agriculture, more and more farmers are growing food or raising livestock under contract to large agri-business conglomerates. In 1997 a third of all crops and 47% of all fruits and vegetables were grown under contract (Nestle 2002). Sixty-three percent of the very largest farms in the U.S. now access the market by entering into contracts with larger conglomerates and large processing firms to mass-produce a specialized, uniform commodity as cheaply as possible (Cochrane 1999).
- *Organic food production is surging.* Another trend of significance is the increased production of organic foods. One in four Americans now purchases organic products, according to the U.S. Agricultural Research Service. In the year 2000, organic sales rose to 7.8 billion dollars, up almost 100% from 4.2 billion dollars in 1997 (Cole 2002). Organic food has become the fastest-growing category in the supermarket, although its sales are still a fraction of the \$400-billion business of selling American food (Pollan 2001). One side-effect of the surge of interest in organics is that larger growers are moving into the organic market. By way of comparison, it is interesting to note that the amount of land organically farmed in both the United Kingdom and the Netherlands is low: 1.5% in the U.K. and less than 1% in the Netherlands. In both countries, however, ambitious targets have been advocated by supporters of sustainable agriculture, garnering some political support that would significantly increase the amount of organically managed land by the year 2010 – to 30% of the land in the U.K. and 10% in the Netherlands.

Changes in the processing of farm products affecting the American landscape

Accompanying the changes occurring in the farm production sector are changes taking place in the way farm commodities are being processed. Four of them are noteworthy: excessively reliant on pesticides, less crop biodiversity, growing use of genetically modified organisms in food production, and rapid increases in factory farms.

Pesticides and chemical fertilizers are staples of farm production. Prior to World War II, farms in the U.S. were largely integrated with crops and livestock. Agricultural chemicals were virtually unused. Pesticide use, however, increased forty-fold between 1950 and 1980 (Gottlieb 2001), a trend that also included very significant increases in application of chemicals per acre. Today's corporate farmers treat their fields with massive quantities of petroleum-based pesticides and fertilizers. The U.S. Department of Agriculture's chemical reports show that in recent years farmers applied 40 billion pounds of fertilizer (primarily nitrogen and phosphates) and about 500 million pounds of pesticides per year (Environmental Working Group 2000). Some of this stays on the farms, but much of it runs off, causing water-quality impairment in lakes and rivers, depletion of organic matter in soils, algae growth and the killing of fish and other wildlife.

There is less biodiversity in crops produced. The result is more mono-cropping and crop specialization on the average farm. Mono-cropping also led to exacerbating the use of pests, which in turn helped lay the groundwork for the extraordinary jump in the use of pesticides (Gottlieb 2001). Highly specialized farms grow only one or two commodities and then ship them all over the country for processing and back again for distribution (Wunder 2002).

More farms are using genetically modified organisms to produce pest-resistant and herbicide-tolerant crops. On U.S. farmland, acreage planted with genetically engineered crops increased nearly 25-fold in the past 5 years, from 3.6 million acres in 1996 to 88.2 million acres in 2001 (Ackerman 2002). More than 60% of all processed foods on U.S. supermarket shelves now contain ingredients from engineered soy beans, corn or canola (Ackerman 2002). In my state, Wisconsin, the State Department of Agriculture reported that 25% of the corn crop will be planted with biotech seed varieties in 2002, up from 18% in 2001. In 2002, 71% of Wisconsin's soybean acres will be planted with herbicide-resistant seed, up 63% from the year before (Kades 2002). In North America and Europe genetically engineered food crops have become subjects of intense debates ranging from unbridled optimism – higher yields, fewer pesticides, better nutrition – to strong opposition – gene flow, collateral damage to the environment, effects on health due to allergens being introduced into foods.

Factory farms are booming. In the name of efficiency and economy of scale, a significant change has occurred in the way animals are being raised. Cattle, pigs, chickens and fish, for example, are increasingly being raised in cramped quarters in giant factory farms before they are taken to be killed and then processed in assembly-line plants. A recent New York Times article points to the striking visual image of cattle feedlots in one Midwestern state “stretching to the horizon” (Pollan 2002). One estimate puts the number of factory farms in the U.S. at 60,000. These concentrated animal feed lots produce staggering amounts of animal waste – 2.7 trillion pounds per year (Sierra Club 2002). Some of the waste leaks into rivers and streams causing pollution. Other harmful effects are contaminated groundwater, foul air and spreading

diseases. Debate has also centred on the use of hormones and antibiotics in animals raised in such surroundings. The Consumer Union, for example, reports that about 20 million of the 50 million pounds of antibiotics produced annually in the U.S. are ingested by animals, usually as a feed additive to promote animal growth or to control infectious bacteria (Ackerman 2002). Another concern is about the large amount of energy used in raising livestock. Corn growers from Illinois, a Midwestern state, for example, ship their feed corn far away to confined animal-feeding operations in the southwest. The livestock is then shipped to packing houses and the meat then sent to distribution centres and ultimately to supermarkets. The upshot is that roughly 10 calories of energy is being spent for every calorie of food produced (Wunder 2002).

Changes in the food system affecting the landscape of rural and metropolitan communities

There is no question that changes occurring in the food system are having effects on the landscape of rural and metropolitan-area communities. Some of these spatial transformations are triggered by changes taking place in the mainstream food system. Others stem from activities that are part of local food systems or sustainable community food systems:

- *Rural communities are changing in character.* With more and more large processing plants (beef, chickens, pork) locating in some rural communities accompanied by an influx of cheap labour, primarily people from Mexico and Asia, to work in these plants, the character and culture of these communities is changing markedly. The difficult times farmers have had in the last couple of decades in parts of the Midwest and south, on the other hand, have made other rural communities virtually ghost towns. Consequently, there are winners and losers among these rural communities as a result of changes occurring in the food system. While changes in rural communities are the focus of occasional attention in the media, more of the public's attention is focused on changes occurring in metropolitan areas.
- *Farmland in metropolitan areas is disappearing at a rapid rate.* Estimates are that a third of the country's 2 million farms in the U.S. are located within the country's 261 metropolitan areas, which take up only 12% of the land area of the U.S., but are the places where 80% of the American population lives. These metropolitan-area farms produce about a third of all crop and livestock sales (Community Food Security Coalition 2001). The most publicized change in the metropolitan-area landscape is the rapid, accelerating loss of farmland to new housing and non-residential developments. Induced by rising urban development pressures, increasing property taxes and greater profits anticipated from selling their land to developers rather than continuing to farm, more and more farmers are getting out of farming on the urban fringe. Between 1992 and 1997 almost 10,000 square miles of farmland was lost to development, the bulk of it located in metropolitan areas (Sorensen, Greene and Russ 1997). This translates to an average annual agricultural-land conversion rate of roughly 2,000 square miles, compared to the annual rate of 670 square miles in the ten-year period between 1982 and 1992. Urban sprawl is seen as the chief culprit, prompting a variety of remedial measures – e.g., reducing property taxes on farms as incentives for farmers to keep farming, setting urban growth boundaries around communities, transferring development rights, and purchasing development rights – to counteract the trend of disappearing farmland. Efforts to save farmland from urban development are

also influenced by many who live in urban areas and would like to preserve pristine farms for their open space and environmental amenities (Gottlieb 2001).

- *More big-box supermarkets are being built on the edges of urban and rural communities.* Given the relatively lax land-use regulation system in urban fringe areas in the U.S., as compared to the stricter regulations in many European countries, building major commercial facilities on the edges of urban and rural communities is easier and more common. In the past decade, one of the more noticeable edge developments is the growing number of large discount food retail outlets like Wal-Mart's Sam's Clubs and Costco's Wholesale Warehouse Clubs. Wal-Mart, which had virtually non-existent food sales in 1993, was by 2003 the largest food retailer in the United States (Supermarket news' top 75 2003). Most of its Sam's Club food retail stores are located on the outskirts of communities in rural, suburban and urban areas. Such giant stores not only contribute to sprawl development, but they also provide stiffer competition to smaller food shops within the cities and towns they border, putting some of them out of business.
- *Supermarkets are leaving poorer areas of metropolitan-area central cities.* A countervailing trend to the growth of urban-edge big-box food stores is taking place in low-income neighbourhoods of inner cities where supermarkets are leaving at a steady rate for suburban locations. Lacking conveniently located supermarkets, low-income residents pay more for groceries in nearby convenience stores and spend more time travelling to more distant supermarkets. Studies show that there are fewer full-service food stores per capita in neighbourhoods with predominantly low-income, minority or immigrant residents (Cotterill and Franklin 1995), consequently leading to food deserts to emerge in some inner-city areas. In addition, low-income households are 6 to 7 times more likely than other U.S. households not to own cars (Murakami and Young 1997). Access to less expensive food stores is consequently more difficult for them.
- *Fast-food restaurants are becoming ubiquitous.* By the end of the 1990s, fast food had become a \$52-billion industry that had transformed both diet and unskilled low-wage work (Gottlieb 2001). In 1972, 7% of the consumer's food budget in the U.S. was spent at fast-food outlets. By 1997 that figure more than doubled to 15% (Hora and Tick 2001). Since 1982 Americans have been increasing their purchases of fast food at a rate of 6.8% a year. Although no definitive link has been established through long-term epidemiology studies between the rise in fast-food consumption and the rate of obesity, there is undoubtedly a connection. As people eat more meals in fast-food restaurants, they consume more calories and fats. Obesity is now rated second only to smoking as a cause of mortality in the U.S., with annual health-care costs from obesity approaching \$240 billion (Schlosser 2001)⁷.
- *Local food-system activities are steadily increasing.* Efforts to promote more local and regional food activity are seen in the growth of community gardens, community-supported agriculture farms, farmers' markets and urban agriculture. By the mid-1990s, 300,000 households were using community gardens in the U.S. according to the National Gardening Association. More than 550 community-garden programmes were in operation by the end of the nineties and in the 40 largest cities in the country, 6,000 community-garden plots were producing food (Santos 1998).

At present 1,000 community-supported agriculture (CSA) farms, which on the whole produce pesticide-free produce, are estimated to be operating in peri-urban areas (University of Massachusetts Extension 2000). The number of CSAs in North

America is estimated to be growing at 12% a year. The CSA is seen as a way of helping small farmers survive by allowing them to sell their products directly to urban dwellers who purchase shares in the farm at the beginning of the growing season to provide the farmers with funds to buy seeds, purchase equipment and pay for maintenance costs.

Estimated 2,800 farmers' markets, which provide important outlets for small and medium-sized farms to sell directly to consumers, are operating in the country. This represents an increase of 63% since 1994 (*National farmers market directory* 2000). The gross returns from farmers' market sales are typically 200 to 250% higher for farmers than from wholesale fresh market sales, because the fewer middle-agents' food products pass through on their way to the consumer, the more money the farmers receive.

Still another fledgling development on the rise is entrepreneurial urban agriculture projects where some of the abundant supply of vacant land in older American cities is being turned into land for food production by community-based organizations⁸. The fresh produce grown or value-added food products produced are then sold at various venues like farmers' markets, restaurants and food retail stores. Estimates are that at least 150 such projects are in operation in inner cities of the U.S. (Kaufman and Bailkey 2000). As befitting an emerging movement, the types of such activities do not fit any single model. Some projects produce agricultural products solely for market sale. Others are hybrids, growing some food for consumption by the growers then selling the surplus. The managers of these projects represent a wide spectrum – e.g. community-garden groups, community development corporations, social-service providers, coalitions for the homeless, school- and university-based groups, and individuals with farm backgrounds who became committed to growing and marketing food in the inner city.

To deal with the increasing problem of hunger-insecure people, the U.S. has also moved heavily into a volunteer-driven system to provide food to those in need (Poppendieck 1998). Numerous food pantries and hot-meal sites supplied by behemoth food banks like Second Harvest are spread throughout cities and counties of metropolitan areas in churches, social-service agencies and neighbourhood centres. To give some idea of the scale of the emergency food system in the U.S., consider that the tonnage consumed by the system's users, if converted into a per capita figure for every American, would amount to roughly 5 pounds of food per capita. In contrast, the comparable figure for the United Kingdom, a country which is beginning to show some signs of moving towards establishing a similar system, amounts to only one-tenth of a pound of food for every citizen (Hawkes and Webster 2000)⁹.

Driving forces for changes in the mainstream food system

The preceding discussion has provided an overview of significant trends occurring in the production of food and in the processes used for farm production, as well as of changes in the food system affecting rural and metropolitan areas. All of these trends have some effects on the American landscape, some more profound than others. Several forces are driving these changes. The most significant driving force is the inexorable movement towards bigness and concentration of power in the hands of fewer and fewer firms at almost every point in the mainstream food chain. Other driving forces can be seen in the changing structure of American families as more women entered the work force in recent decades, increasing globalization of the food system, the environmental movement and equity concerns.

There is an increasing concentration in the mainstream food industry. One expert likened the American food system “to an hour glass in which farm commodities produced by thousands of farmers must pass through the narrow part of a glass that is analogous to the few firms that control the processing of the commodities before the food is distributed to millions of people” (Heffernan 1999). The narrow part of the glass encapsulates the processes of horizontal and vertical consolidation increasingly taking place as big corporations assume greater ownership and control of smaller mainstream food-system operations. It is like the popular video game, Pac Man, that many youngsters played some years back, where bigger characters on the screen swallowed up smaller ones, only to be swallowed up in turn by even still bigger characters, with the process going on ad infinitum for the successful players.

For major food-commodity sectors like beef packing, pork packing, broilers, turkeys, as well as flour, corn and soybean mills, four firms in each of these sectors now control from 50 to 80% of the market (Heffernan 1999). More specifically, the figures are 82% of beef packing, 75% of hogs and sheep raising, and 55% of chicken growing (Greider 2000). Over a relatively short period of time in the 1990s, these larger firms steadily acquired smaller firms in these sectors to increase their market share. The process of *horizontal integration* can be seen in the poultry production sector where the four top firms increased their share from 23% in 1990 to 55% by the end of the decade (Gottlieb 2001). A few giant agribusiness corporations like ConAgra show up at the top end of the list for processing several commodities – beef, pork, turkeys, chickens and seafood.

Organic-food producers, who are increasing considerably their sales, are also subject to takeovers by bigger firms. Some believe that now that organic food has established itself as a viable alternative food product, agribusiness has decided that the best way to deal with that alternative is simply to own it. The organic sector is being divided increasingly into Big Organic and Little Organic. The big organics appear to be taking over many of the small farmers for whom organic represented a profitable niche. An example is Horizon, a \$127-million public corporation in Colorado that has become the Microsoft of organic milk. It now controls 70 % of the retail organic-milk market in the U.S. (Pollan 2001). Five giant farms control fully one-half of the \$400-million organic-produce market in California (Pollan 2001). Also Cascadian Farm, one of the older organic brands, recently became a subsidiary of General Mills, the third biggest food conglomerate in North America (Pollan 2001).

The process of *vertical integration* is also evident and spreading. Many growers of chickens, for example, effectively became employees of “integrator” companies like ADM, ConAgra, and Tyson Foods. Not only do these companies contract with the poultry growers, but they often own the hatching facility (sometimes in the form of factory farms), the feed mill and the processing plant. As Heffernan says, “The major concern about concentration in the food system focuses on the control exercised by a handful of firms over decision-making throughout the food system” (1999, p. 3).

ConAgra is a particularly interesting example of vertical consolidation. This mega-agribusiness company ranks in the top four firms in several essential phases of the beef-packing industry – i.e., producing animal feed, feeding cattle and processing cattle. With diversified interests ranging from “farm gate to dinner plate”, a ConAgra subsidiary can be found along most links of the food chain. The corporation acquired or created joint ventures with approximately 150 companies from 1988 to 1998 with its aim to have 80 to 100 acquisition candidates in screening at all times (Heffernan 1999).

Another interesting development is the clustering that is occurring between some big food-processing companies and large biotechnology firms. An example is the joint venture that Cargill, one of the largest agribusiness firms, established in 1998 with Monsanto, one of the leading biotechnology firms. A key aim of the partnership was to obtain control of the terminator gene that could be implanted into plants to cause all of their seeds to be sterile. Use of the terminator gene would mean that all crop farmers had to return each year to obtain their seeds from the seed firms. Here is an example of bringing together two giants, occupying positions at different points in the food chain, to hasten the trend towards use of genetically modified organisms in food production (Heffernan 1999).

The same trend towards concentration and consolidation is occurring in the bottom half of the food chain. Horizontal integration has occurred very rapidly in the food-retailing sector in the last few years. In 1997 the top-five food retailers, which include Wal-Mart and the Dutch-owned Ahold, accounted for 24% of retail food sales in the United States. By 2001, these five companies almost doubled their share to 42% of retail food sales (Hendrickson et al. 2001). Vertical integration, connecting food retailers back to the food production and processing stages, is also occurring. Kroger, one of the big five, has case-ready beef supply agreements with a Cargill-owned subsidiary, and Wal-Mart has similar arrangements with Iowa Beef Producers, Farmland and Smithfield, three of the largest beef and pork processors (Hendrickson et al. 2001). The food retail chains also own their own warehouse facilities where their products are stored before delivery to their food stores as well as produce their own brand-name products displayed prominently in their supermarket outlets.

The effect of greater concentration can also be seen in the fast-food industry. The two largest fast-food chains are McDonald's and Burger King. McDonald's, with 12,800 stores in the U.S., had sales in 2000 that amounted to 19 billion dollars. Burger King, although a giant corporation itself, had numbers that paled in comparison – 8,000 stores and 8 billion dollars in sales for the year 2000 (Nestle 2002). Value-added products like McDonald's chicken nuggets, for example, significantly influenced the restructuring of the poultry industry. Introduced by McDonald's in 1980, chicken nuggets now account for \$6 billion in poultry-related sales and chicken processed products went from 1 of every 10 chickens to 1 of every 3 chickens (Gottlieb 2001).

One can readily see that the increasing concentration taking place throughout the food chain – from the big food producers who capture the lion's share of federal commodity support grants to the food retailers and fast-food industry – have effects on the American landscape. The trend towards bigness, concentration and consolidation favoured use of contract farming, "factory" farms, pesticides and chemical fertilizers, and genetically modified organisms in the quest to achieve greater efficiency and economy of scale, as well as to capture more market share for the bigger players in the food system. Their policies also have affected rural communities. Some communities became losers because the momentum of the mainstream food system led to weakening the capacity of small family farmers to survive, thus eliminating the life blood of some rural communities as they were transformed into virtually shells of what they were in an earlier era. Other communities became places where new large processing plants that converted slaughtered animals into packaged foods settled. Demographic changes in the make-up of the populations of these communities were common. Labourers from Mexico and Asia, often paid low wages and engaged in dangerous work, staffed these processing plants. And sometimes tensions between the community's older white and

newer ethnic residents would arise. The emergence of factory farms in greater numbers to accomplish more large-scale, efficient poultry and cattle raising is another spin-off of the trend towards bigness. The rapid growth of the fast-food industry, which now accounts for one fourth of all meals consumed outside the home (Nestle 2002), has also affected food production on the land by contributing to the trend towards less biodiversity in crops produced. For example, because of demands by the fast-food industry for a more homogeneous type of raw material, basically only 6 varieties of potatoes are grown in the U.S. today (Gottlieb 2001).

Another aspect of the trend towards concentration relates to energy use, because more and more producers of fresh produce are concentrated in places located far from the markets where their produce is consumed. The long distances food must travel from production source to consumer affect energy costs. For example, in 1997 the average pound of fresh produce travelled 1,685 miles from where it was produced to the main wholesale market in Baltimore, Maryland (Hora and Tick 2001)¹⁰. Not atypical are eastern states like Massachusetts, which buys 85% of its food from some place else. Its food import imbalance translates to a \$4-billion leak in the state economy on an annual basis of (University of Massachusetts Extension 2000).¹¹ Another example of energy depletion is the transcontinental strawberry (5 calories of food energy), which takes 435 calories of fossil-fuel energy to deliver to the consumer's door (Pollan 2001).

Changes in food consumption patterns also have had effects on the country's food landscape. This is due in part to the increasing number of women who entered the workforce in the past few decades. Many were either unable or unwilling to spend as much time cooking at home. This led to the rise in production of a vast array of convenience food products found in supermarkets, many developed by the largest food-processing companies.¹² In addition, more people began to eat outside the home. Today, forty cents out of every dollar in the U.S. is spent on food eaten outside the home in restaurants and other commercial food services (Ackerman 2002). The entry of a flood of restaurants and fast-food restaurants in American communities in the last 15 years or so is in part due to these changing food consumption patterns. Also, the cheap-food policy followed in the U.S. means that Americans spend less of their disposable income on food than people in any other country. The average American now pays less than 10% of income for food (Nestle 2002) compared to 33% at the turn of the 20th century.¹³

The *environmental movement* has also affected the landscape of the American food system by changing the practices of mainstream food growers, in part through federal and state farm aid programmes that provide incentives for conservation measures. The 2002 National Farm Act, for example, set aside \$18 billion for farmers to engage in a variety of soil and water ecology measures. In addition, the environmental movement has provided support for local and regional food systems as reflected in the growing number of pesticide-free organic farms and community-supported agriculture farms. Greater public awareness of the value of healthier foods has also been a spur to farmers to produce fruits and vegetables with lesser amounts of chemical fertilizers and pesticides.

The trend towards *globalization* also affects patterns on the land. Public Law 480, passed in the mid-1950s was designed to use food as a political tool in the Cold War, while at the same time establishing new international markets for U.S. food products and U.S. commodities such as wheat. Also, U.S. "green revolution" policies were designed to restructure food-growing patterns outside the U.S. that made them more dependent on off-farm businesses such as manufacturers of agricultural equipment

and chemicals. The PL 480 programmes promoted the idea that residents of less developed countries in the Far East, for example, should now “eat the U.S.-produced wheat, who didn’t eat wheat before”, as one USDA official commented (Gottlieb 2001).

Stiffer competition from other countries is also affecting U.S. food producers. Over 40% of all fresh fruit consumed in the U.S. now comes from Mexico, Chile, Guatemala, Costa Rica and other foreign countries (Ackerman 2002). As with European countries, the “ghost acres” drawn on from other countries to supply the needs of the U.S. for certain kinds of food continues to increase in size. It is also interesting to note that for the first time in history, Californian fruit and vegetable growers, long the dominant force in producing fresh produce in the country, lobbied successfully to be included among the farmer groups to receive subsidy payments in the 2002 Farm Act. In part their request is because of the increasing competition they face from other countries that produce the same products they grow more cheaply because of lower labour costs. The 2002 Farm Act also reflects concerns of American food producers about the rising amount of imported food coming into the country. This law now makes it mandatory to have country-of-origin labelling for all meats, fruits, vegetables and fish.

A leading international food-policy expert states that the current phase of globalization in the world of food is characterized by a new pace and scale of change (Lang 1999). Yet, despite the strong talk about free trade and free markets, he contends that the realities of the food sector in many Western countries are characterized by large-scale concentration and centralization, both politically and economically.

Finally, changes in the food system have been affected by the American public’s value for *greater equity and fairness*. This is seen in the largely volunteer-run anti-hunger network of emergency food assistance places like food banks, food pantries and hot-meal sites scattered over the terrain of most metropolitan areas. Concern about inadequate access to affordable food for low-income people in inner-city neighbourhoods due to the loss of supermarkets, and increased access to food given by the opportunities that community gardens and urban agriculture present, are also reflections of this trend.

Strengthening the local food system through stronger planning

There is little question that the mainstream food system is the dominant force in the American food sector. This “900-pound gorilla”, driven by the market economy and characterized by fierce competition among the bigger players, is powered by the ability to spend massive resources on advertising, political lobbying, public relations, philanthropy and even financial support to scientific groups to undertake more friendly research (Nestle 2002).¹⁴ Strategic planning goes on within that system, but it goes on primarily within the large firms themselves for purposes of increasing their market share. At times, strategic alliances are forged between corporations – e.g., Monsanto and Cargill – and these are likely the outgrowth of strategic planning in which shared interests are pursued jointly.

But not much that goes on in the mainstream food system supports the nurturing of the more fragile, locally-based alternative food system. In some instances, food companies are beginning to acknowledge some of the objectives espoused by the local food system. For example, companies are introducing fat substitutes, producing items such as reduced-calorie cheesecake mixes or McDonald’s McLean hamburgers.

Others, like Phillip Morris, the third largest producer of packaged foods in the world, are advertising in health and fitness magazines for their philanthropic food donations in efforts to address hunger issues (Nestle 2002). But increasing market share and profit are still the driving motives behind such actions. The reality is that the mainstream food system is not going to go away. The likelihood is that it will continue on the path of greater concentration and consolidation and grow even stronger.

Consequently, the challenge for local food systems – characterized by community gardens, farmers' markets, CSA farms, entrepreneurial urban agriculture, family farms, organic farms, sustainable agriculture, food co-ops, community kitchens, nutrition education and farm-to-school programmes – to succeed is formidable. Sometimes parts of the local food system work together in concert, but more often they work independently of each other. The local food system cannot turn to the mainstream food-system players for much assistance. A stronger planning approach that initially takes into account the needs as well as strengths, weaknesses and opportunities of local food systems can help them establish a more solid and sturdier footing within the shadow of the dominant U.S. food system.

What is needed is a more comprehensive and sustained planning presence that initially can provide a deeper, more penetrating, and dimensioned understanding of four things:

- *Market gaps* that the mainstream food system does not do a good job of addressing, especially those that adversely affect more fragile groups and interests in a region – e.g., small family farmers, low-income groups, at-risk consumers, school children and those ecological and environmental assets harmed by excesses resulting from certain practices of agribusiness firms that dominate the food chain.
- *Benefits of local food systems* – e.g., increasing individual and community self-reliance, reducing health costs due to poor nutrition practices, providing more direct linkages between farmers and food consumers, reducing the need to rely on pesticides in crop production, providing healthier food choices for children in schools¹⁵, channelling more locally produced foods into outlets, keeping more small farmers in the farming business, providing more aesthetic value for urban residents by saving farmland, causing less harm to environmental resources, assisting new immigrants who have agricultural experience to farm locally, strengthening rural community economies and their social fabrics, and providing better access for low-income residents to more affordable, nutritious and culturally appropriate foods.
- *External costs resulting from increased concentration in the mainstream food system* – e.g., increased energy costs resulting from the long distances foods need to travel to get to consumers, less biodiversity in farming, increased amount of ghost acres¹⁶, more food-safety problems, increased health costs attributable to oversupply of nutritionally deficient processed foods in supermarkets and fast-food restaurants, negative effects of food advertising on children and minority groups, more environmental damage attributable to the way food waste is conventionally disposed of, increased water pollution and soil erosion clean-up costs due to excess use of pesticides and chemical fertilizers for crop production.
- *The community's food system, both in its mainstream and alternative aspects.* This would involve undertaking an assessment of a broad range of food-related issues in the community, including hunger, diet-related diseases, lack of economic opportunity and access to food among low-income people, the effects of sprawl development on farmland, urban agriculture possibilities, the extent and capacity

of alternative food production, marketing and retailing practices at the community level, the role of food establishments and food employment in the local economy, food consumption expenditures and patterns of different income, class and age groups in the community, food-sector impacts on environmental conditions, food-related health problems among the community's residents, and the effectiveness of farmland preservation measures.¹⁷

With an improved data and analytical base to understand more fully the local food system, its benefits, its strengths and weaknesses and what it is up against, efforts could be undertaken to devise policies and strategies to build a sturdier and more resilient local food system. This would take a strong collaborative effort among the local food system players. It would also involve developing partnerships with government, faith-based organizations and major institutional organizations in the community like hospitals, schools and religious organizations. It could also involve working with groups in the mainstream food sector that support some of the objectives of local food systems, although local food-system proponents should be careful to avoid being co-opted by the ample lures the mainstream proponents can offer.

Policies to strengthen the local food system would grow out of the solid planning groundwork that was undertaken. These could range over a wide front. They might be aimed at getting major institutions like local government, hospitals and schools to purchase more food from local and regional sources; providing incentives for greater production of organic, pesticide-free foods; developing locally-based food-related industries from the production side to processing, marketing and retailing; establishing land trusts to hold land for community food production; providing a multi-pronged nutrition education programme to raise public awareness of the critical connection between poor diets, illnesses and rising health costs; improving public transportation access for low-income people to affordable, nutritious and culturally appropriate food places; changing restrictive government practices that discourage the operation of community-based food enterprises; encouraging greater co-operation between levels of government in setting appropriate policies to build healthy and sustainable local food systems.

Having made suggestions for the kind of information needed and the policy terrain for building a stronger local food system, let me turn now to the institutional arrangements and resources needed to achieve better local food-system planning. An encouraging sign in the United States is the emergence in recent years of a loose but powerful amalgamation of diverse but related interests that came about to "correct" the ills of the current food system. Some representatives from sustainable-agriculture, hunger-action, family-farm, community-development, environmental, social-justice and nutrition-advocacy groups started working together to bring about change. One shared interest was to build greater support for and reliance on local and regional food systems. An umbrella organization, the Community Food Security Coalition (CFSC), was established in 1996, and has slowly grown in membership to spearhead the movement in its efforts to bring about change. Coalition founders were influenced by a variety of perspectives. These included public health's prevention orientation, ecology's system analysis, community development's place-centred focus and emphasis on economic development, and sustainable agriculture's focus on growing food without pesticides and helping small farmers to survive. The CFSC aimed to weave these strands into a more comprehensive framework for meeting a community's food needs that addressed the food needs of low-income people, emphasized self-reliance by building individuals' abilities to provide for their own

food needs rather than depending on outside sources such as food banks or public benefits, protecting local agriculture and building up a community's own food resources.

In 1996, the then newly formed Community Food Security Coalition was successful in getting the U.S. Congress to adopt the Community Food Projects (CFP) programme funded for \$10 million for six years as part of the national 1996 Farm Act. The more than 125 CFP proposals that have been funded in the six-year period from 1996 to 2002 exemplify many of the activities that fall under the rubric of local food systems.

As part of its recent efforts, the CFSC developed a policy initiative for the 2002 Farm Bill (Community Food Security Coalition 2001). One of its proposals was for a new planning-grant programme to be funded at the level of \$5 million a year (\$30 million for the six-year life of the legislation). In addition, it called for expanding the Community Food Projects programme to \$10 million a year (\$60 million for the six-year period). Although the CFP programme was continued as part of the 2002 Farm Act at a reduced level of \$5 million a year, the proposed planning-grants programme was not funded.¹⁸ Regardless, it is instructive to consider what this initiative covered. In addition to providing grants to community groups for programme and business planning, the bulk of the funding would have gone to undertaking community food assessments and “developing and operating entities that provide *comprehensive food system planning*” at a variety of jurisdictions, including the state, region, county and municipality. Such entities would be public/private partnerships incorporating multiple stakeholders from a wide variety of activities associated with food production, consumption and distribution. They would be authorized to “provide an on-going focus on the development and performance of their local food system”. CFSC recognized that food-system planning at the community level “is far too infrequent, due in part to a lack of financial and political support”. It argued that community food-system planning made admirable sense as an investment in the future. Comprehensive planning for local food systems would be immeasurably enhanced if a funding stream like the one the CFSC proposed had been enacted in the 2002 Farm Act. Although it was not, there is a good likelihood that in the coming years such a funding proposal will be accepted by the U.S. Congress. Regardless, efforts to provide a stronger institutional footing and funding support for undertaking local food-system planning are important to pursue.

There are other institutional arrangements that follow from the community food-security movement and that have the potential to advance local food-system planning. One is the *local food-policy council*. About 25 communities in the United States and Canada have established local food-policy councils. Typically, food-policy councils exist outside government structures. While often sanctioned by local governments, food-policy councils are usually comprised of representatives of different segments of the food-system community – e.g., members of farmers organizations, anti-hunger organizations, retailers, nutritional-education experts and sustainable-agriculture organizations, as well as local government. They represent central points for considering a wide range of food issues at the local level. Almost all try to monitor the food system in the locality and work to get various rips and tears in that system mended. Most pursue the goals of a more equitable, ecologically sustainable and effective food system. Their activities fall under broad categories of research and analysis, community education, policy advocacy and community development through a food-system focus. Food-policy councils represent the closest thing to a centring of attention for food-related concerns at the local level, but they have decided

resource limitations in terms of funding and political clout. Still and all, they have promising potential as a locus of planning for the local food system.

No city government in the U.S. has a *department of food*. Parallel city units dedicated to other functional issues such as transportation, housing, community development, parks and recreation, and health and human services, however, are common in the American governmental system. Some argue that the lack of a central agency in local government devoted to food issues accounts for why these issues are on the back burner of public concern. Yet a well funded and staffed food agency in local government could become the locus for better planning to take place as well as both an important ally and facilitator of local food-system objectives¹⁹. It is interesting to note that one of the most effective food-policy councils in North America is a quasi-governmental agency, the Toronto, Canada, Food Policy Council. Established in 1990, the Toronto Food Policy Council operates as a subcommittee of the city's Board of Health. Yet it is unique among the city's sub-committees in that it has a degree of independence that most lack. With a small staff, it has produced a steady stream of insightful reports about important food-system issues in the Toronto area including ones on reducing hunger, moving from food charity to food security, reducing excess fat consumption in diets, contaminants in food, micro-food enterprises and implications for economic development and food retail access, and strategies to integrate the food and health-care systems.

One place in local government where a more holistic understanding of the local food system could occur is in the *government planning agency*. Planning agencies, found at the municipal, county and regional levels throughout the nation, are very much oriented to taking a more comprehensive look at what is going on in the communities they serve, to dealing with a myriad of issues confronting their communities and to planning for their community's future. Yet no local government planning agency has ever undertaken a comprehensive or even partial study of its community's food system. This is despite the planning field's claim to being the discipline that takes the most comprehensive look at communities and how their parts interconnect. Traditionally, planning agencies are involved in a variety of functional areas – e.g., land use, transportation, environment, energy, housing, the economy, and parks and recreation – but food, one of the essentials of life, has largely escaped their gaze (Pothukuchi and Kaufman 2000). Assuming that more of them would get involved in the future, they could make important contributions to strengthening the local food system, among them: compiling and interpreting data on local food-system conditions and capacities; analysing connections between food and other planning concerns like transit, economic development, community health and the environment; assessing the impact of government policies and regulations on the local food system; and integrating local food-system goals into community goals.

The final arrangement to facilitate better planning for local food systems is premised on the need for supporters to link more closely to the emergent *healthy/sustainable-communities movement* in the U.S. The Coalition for Healthier Cities and Communities in the United States, the Sustainable Communities Network and the Smart Growth Network are examples of such organizations.²⁰ As this movement continues to increase in adherents, it will undoubtedly lead to more sustainable policies and practices being adopted at the local level. One could envision more communities working to achieve the broad goals of sustainability – a wholesome and clean natural environment, a prosperous economic environment, and an equitable social environment. The goals of increased food self-reliance, producing more food closer to home, and community residents eating healthier food, central to

what local food systems aspire to achieve, fit in well with the healthy/sustainable-communities movement. Not only that, the healthy-communities' movement could become the larger tent under which local food systems could nest. In fact, the planning being done to achieve healthy/sustainable communities could be extended easily to address local food-system issues. One example from Canada can be seen in the plan for sustainable development that the community of Hamilton, Ontario developed (City of Hamilton 2000). That plan includes such goals as ensuring sufficient land in the locality to grow food for future generations, making agriculture a viable economic activity in the city, improving understanding of agriculture concerns by urban dwellers, and ensuring healthy and sustainable food production and consumption patterns. These goals would be consistent with those of local food systems. There is a clear synergy to be gained by local food-system proponents connecting to the healthy/sustainable-communities' movement.

Conclusion

Marion Nestle begins her book, *Food politics*, with a description of the food industry in the United States.

“The food industry has given us a food supply so plentiful, so varied, so inexpensive, and so devoid of dependence on geography or season that all but the very poorest of Americans can obtain enough energy and nutrients to meet biological needs. The overly abundant food supply, combined with a society so affluent that most people can afford to buy more food than they need, sets the stage for competition. The food industry must compete fiercely for every dollar spent on food, and food companies expend extraordinary resources to develop and market products that will sell” (2002, p. 1).

The words “regardless of their effects on others” could be added to her last sentence. And this is where the negative effects of the present dominant, mainstream food system can be seen. That is, the negative impacts that the mainstream food system has on public goods like environmental and energy resources, on community health, on small farmers, on food safety problems and on lower-income people. The local food system, in contrast, operates from a different set of principles. Geography and season do matter. Reaching toward a more self-sustaining system of food provision that is grounded in place and locality is fundamental to local food systems. So is a food system that encourages more self-reliance of people, especially the poor, and communities in meeting their own food needs. So is a food system that elevates healthy and nutritious foods to a position of great importance to counteract the easy access that most people have to an oversupply of less nutritious food that fosters poor diets, illness and higher health costs. So is a food system that cares for rather than is cavalier about conserving scarce and precious environmental and energy resources. So is a food system that helps small farmers, increasingly pressed to survive in the farming business because of getting less of the food dollar, stay in farming. Local food systems, in their ideal state, would support these goals and more.

It would be folly to think that local food systems could ever topple or even substantially compete with the mainstream food system. At most, they could challenge the dominant and powerful mainstream food-system model by offering a resilient alternative way of organizing the food system. In doing so, they would occupy a stronger perch in the total food system and show the public that there is a viable alternative to the abundance of competition, concentration and consolidation

that drives the engine of the mainstream food system. Planning can play an important role in building that stronger and more resilient local food system.

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¹ These principles are based on objectives sought by the Community Food Security Coalition, a coalition of organizations and people drawn from the ranks of environmentalists, adherents of sustainable agriculture and local community development, and community-nutrition researchers and educators, all of whom favour stronger local food systems.

² By food sector, I mean the full chain of activities starting with the food producers – the farmers – and then moving on to include food processing, distribution, wholesaling, marketing, and retailing, ending up with the consumption of food in homes and eating-establishments, and the disposal of food wastes.

³ In fact, one-third of all the land in North America (which includes Canada) is used just for the grazing of cattle (Gottlieb 2001).

⁴ A reflection of the acceptance of the trend towards increased size of individual farms was a recent statement by an Undersecretary of the U.S. Department of Agriculture who called for farms to average 250,000 acres, the equivalent of 4 square miles.

⁵ Going back to the 1930s, this federal programme has always been designed to protect farm income by placing limits on farm commodity production and creating price supports for certain commodities – e.g. rice, cotton, wheat, oats etc.

⁶ The most visible subsidies are price supports for sugar and milk, but there are also subsidies through production and marketing quotas, marketing and promotion programmes for major food commodities, land management, low-cost land leases, import restrictions and other measures (Nestle 2002).

⁷ Estimates are that obesity now kills 333,000 North Americans yearly. It is expected that obesity will soon pass tobacco as the leading preventable cause of sickness and death (Food fight 2002).

⁸ Larger older cities like Detroit, Philadelphia and Chicago each currently have from 50,000 to 70,000 vacant lots. Many of these lots are in low-income neighbourhoods where demand for using the vacant land is minimal, thus opening up avenues for urban agriculture use.

⁹ Note that without the \$20-billion expenditure on the U.S. food-stamp programme, the figures for food from emergency food sources might jump to 8 to 10 pounds for every American.

¹⁰ More specifically, the average pound of fruit traveled 2,416 miles and the average pound of vegetables traveled 1,596 miles to the Baltimore wholesale market.

¹¹ University of Massachusetts studies estimate that the state could produce closer to 35% of its food supply. This 20% increase would contribute \$1 billion annually to the state economy (University of Massachusetts Extension 2000).

¹² In 1998, food manufacturers introduced slightly more than 11,000 new products into American supermarkets. Since 1990, 116,000 packaged foods and beverages have been introduced, with only a small percentage of them surviving on supermarket shelves from year to year (Nestle 2002).

¹³ Poorer people with annual incomes between \$5,000 and \$10,000, however, spend more on food, an average of 34% of their income (Hora and Tick 2001).

¹⁴ With respect to advertising, for example, the 1999 annual budget for the educational component of the National Cancer Institutes's "5 A Day" campaign to promote consumption of five servings of fruits and vegetables each day, was under \$3 million in 1999. This amount is miniscule in comparison to the advertising budget of any company that manufactures a single candy bar, soft drink or potato chip (Nestle 2002, p.131). By way of comparison, consider that the advertising budget of the 10 leading producers of packaged foods in the United States was over six and a half billion dollars in 1999 (Nestle 2002, p.12).

¹⁵ A small, but vigorous effort is underway in the U.S. to provide healthier food choices for children in schools – e.g., salads from products grown locally – and remove nutritionally deficient food products like sodas, chips and fast-food products from school lunch programmes and vending machines. One recent example was the action of the Los Angeles Unified School district which voted unanimously in August 2002 to ban the sale of sodas and other unhealthy beverages on all of its 677 school campuses (DiMassa and Hayasaki 2002).

¹⁶ The term ghost acres, or hidden acres, refers to the amount of land used in poorer countries that richer countries draw upon to provide foods they want for human or animal consumption (Lang 1999).

¹⁷ A recent publication on how to undertake a community food-system assessment that covers some of these issues is titled "What's Cooking in Your Food System? A Guide to Community Food Assessment" (Pothukuchi et al. 2002).

¹⁸ The 2002 law, however, did give preference in selecting CFP projects to encouraging "long-term planning activities, and multi-system, interagency approaches with multi-stakeholder collaborations, that build long-term capacity of communities to address the food and agricultural problems of the communities, such as food policy councils and food-planning associations".

¹⁹ An example of a food agency integrated into the local government structure was the London Food Commission which operated in that vein from 1984 to 1989 as part of the Greater London Council government, until the Council's demise under the Thatcher government. At its peak the Food Commission had a staff of 15 engaged in research on food issues, bringing together less powerful people and organizations interested in having more of a voice on food issues, and linking issues of food consumption with food production.

²⁰ The missions of the U.S. organizations mirror those in Europe and Canada – e.g., Europe's Agenda 21 and the Sustainable Cities and Towns Campaign, the World Health Organization's Healthy Cities Project, and Canada's Healthy Cities Initiative.