

INSTITUTE OF CURRENT WORLD AFFAIRS

AAG-2
Urban Foodsheds

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Dear Peter,

More attention is being paid to the question of where our food is coming from, and how it is getting to us. There are many reasons for this, with the current low public confidence in the safety of the food supply triggering a gradual educational process about the system as a whole.

Many of the assumptions which have created the elaborate processing and distribution network between the farm and the dinner table are under closer scrutiny, and people who make it their business to supply us our food are currently being tested for their ability to respond to shifting consumer desires and concerns.

In order to try and picture how local and regional food supply systems work, I have found useful the image of a "foodshed". A foodshed, like a watershed, is the area that is defined by a structure of supply. I like the term, because it suggests the concept of the need to protect a source. Common sense and past experience have shown us the wisdom of conserving a watershed area, and I believe we may be in the process of extending similar concepts to our food system.

As in watershed protection, this will require specific geographic and ecological knowledge of its dimensions, condition and stability for it to be safeguarded and enhanced.

We have in the US, a most elaborate system capable of almost eliminating the concept of seasons. Even very perishable fruit like strawberries can be ours in January, provided we are willing to pay for them, and so our most rudimentary map of a foodshed might cover the globe, or resemble an octopus with long tentacles extending out from a large urban supermarket to remote tropical plantations, vast Midwestern grain acreage, and California irrigated valleys of fruits and vegetables.

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Food distribution follows more abstract rules than watershed flows. Typically what determines where a food item appearing in a store comes from are variables like the price, or availability against demand.

Usually, however, the rule applies here as in most other aspects of our economic system: if people are willing to pay for it, almost anything can be found. The crux of the matter is that the total cost of this way of moving food is not reflected in the purchase price and that there are hidden costs involved.

If the complexity and extension of the food supply system eludes initial attempts to capture what a foodshed looks like, it may still be measurable if one could watch a border over which food is passing. This border can be defined at a number of levels. In fact, this has been done to define food flows for nations, states, cities, and smaller institutions.

Beginning about ten years ago, a project which analyzed the relative food self-sufficiency of individual states was carried out under the name "Cornucopia Project". A model for assembling the data for state-by-state food audits was developed by the Rodale Press, of Emmaus, Pennsylvania, and many private groups and universities participated in doing this analysis locally.

Using the state line as a border to define incoming and outgoing flow, these reports obtained production and consumption data as well as dollar figures on the 'imports' and 'exports' of basic agricultural commodities, processed foods and meat products, and traced the equivalent retail values leaving or staying in the local economy. In addition, state land resource statistics were used to investigate whether food imported into the state could be raised locally, and what impact the multiplier effects of local production would have over the existing import situation.

The findings in some of these individual state reports were striking. A 1982 study of Ohio's food system, described the state as being in "the condition of a food colony" importing 57% of the food consumed in the state, often purchased as processed foods, while exporting grains such as corn and soybeans typically as raw materials, and often to volatile international markets. Including the multiplier effect these money flows involve, Ohio was calculated to be losing around 12 billion dollars annually.

Students at Oberlin College, participating with the Meadowcreek Project, an Arkansas based environmental education center, adapted the same kind of analysis to a smaller scope, in order to determine how supportive the college's food purchasing patterns were of local county and state agricultural economies. This has been done at other institutions as well, including city scaled audits.

The studies have drawn attention to the increasing reliance upon long distance shipping of foods, and the energy costs of

such a elaborate system of food distribution. One recurring statistic is that the average food item travels 1300 miles before reaching its final destination, with an estimate of total US transport costs for food in 1986 at over \$21 billion.

A study done in 1984 on "Energy and Agriculture" found that hidden transportation costs were not included in this figure. Maintenance costs for roadways, which are now becoming a serious issue nationwide, have a disproportionate connection to heavy users. Large tractor trailers which are often utilized for interstate hauling of food are capable of doing "as much damage to a mile of roadway as 9,600 automobiles" while paying what is sometimes proclaimed on the back of semis, "7 to 8 times the road taxes" of passenger cars.

Other consequences of the dependence upon distant sources for food have been made clear. Beyond the vulnerability to disruptions such as fuel shortages, or trucking strikes is the lack of support for local farmers. With the goal of keeping more money circulating locally and in turn generating more jobs and income, farmers, small businesses and local manufacturers have been assisted by State governors' offices and local chambers of commerce through promotional campaigns such as Grow Ohio, and Buy Ohio programs.

While these efforts can direct the purchasing policies of state agencies or private institutions that have adopted these goals into coordinated purchase plans, it is difficult to establish what effect these are having on individual consumer buying habits.

How consumers have been responsible for the reshaping of foodsheds is a more subjective and indirect process of change. I think that changes are taking place here, although my perceptions are necessarily a stroboscopic view of things, having seen things in intermittent flashes as I return to the US for brief visits while based in Asia for most of the last five years. Bear with me if this all seems obvious; what I have noticed is that Americans are increasingly making distinctions about the taste, freshness, and safety of foods, which also are concerns related to the origins of their food, and their familiarity with what goes on in the fields.

Farmer's markets, like the one I used to visit when I lived in the suburbs of Washington, D.C., are now hard to move around in for the crowds that they draw. These are the places that one could go for the chicken that tastes like chicken, or the tomato that tastes like a tomato, although increasingly, success is tied to how early one gets to sleep the night before.

People are becoming much more health conscious, and their eating habits are clearly shifting away from red meat; meanwhile the vegetarian fare at restaurants and fast food establishments has become considerably more varied and appealing.

There is an element of irony in this.

My wife Kazari and I are witnessing a kind of dietary reversal between East and the West...as young Americans are eating more like Japanese, traditional foods are falling out of favor in the streets of Tokyo, and young Japanese are making the most of the American-style fast food chains. French fries, hamburgers, and other grease-is-the-word items are having their predictable results, with abundant evidence of adolescent skin problems and their benzoyl peroxide formula rescuers engaged in house to house combat.

Although it probably accounts for a small fraction of the total sales in a supermarket, the produce section in suburban American grocery stores appear to have become a much more important element in drawing customers, and the increase in the variety of vegetables and fruits available and expanded floor space devoted to them surprises me. I also was surprised to see organic produce sold in some of the larger supermarkets. It still isn't that easy to find organic produce, though. The demand seems to have outstripped the supply in many places. And estimates are that the proportion of organic produce in the food supply, now at about 1%, won't approach ten percent of the total for years to come.

Those places that cater to the more conscientious consumer, the health food stores and natural foods coops, have grown larger and more organized than I had previously witnessed. In our travels, we have sought organic food for our infant Regina, and so have realized that an added dimension to our travels is a tour of these enterprises around the country. They are more numerous and easier to find now, although a search is still more efficiently conducted in a telephone directory than by driving down Main Street.

Some are impressive, well organized and well stocked operations. Many have switched to having paid staff in addition to the original flow of volunteers. Not only have we often found a good variety of fresh organic produce, but also an impressive array of processed foods, and baked goods, as well as pickled and dry goods from Europe and to Kazari's particular delight, from Japan as well. The organic foodshed might not be as large as the conventional ones, but it appears to be as extensive.

Obviously all of this change in the lower reaches of these foodsheds have been due to corresponding changes happening 'upstream'. An interesting pair of reports has me trying to substantiate what is being claimed about the pattern that foodsheds have and of what will take place into the future.

I came across an article published last spring that struck me as being optimistic, and well argued. It was by long time writer on agricultural topics Gene Logsdon, and was entitled, "The Future: More Farmers Not Fewer."

His perception is that there is a new breed of farmers emerging, that has urban roots and environmental values, and that

these farmers are doing well in the marketplace. I have met a number of them, several are friends who fit the description closely.

They are what he would call "guerrilla marketers" or specialty farmers who have avoided the conventional mold of large scale monocrop farming, and have gone after other strategies.

By farming smaller pieces of land more intensively, these farmers are avoiding many of the pitfalls associated with large land holdings, large machinery investments and interest payments to match. These include 'u-pick' operations, where consumers come to harvest the crop...or the direct supply to consumers through regular farmer's markets and to restaurant food buyers who are seeking more quality than what the wholesalers can provide.

Some farmers are adhering to strict patterns of practices which reduce or eliminate all use of synthetically compounded fertilizers and pesticides, and are getting a premium price for their organically produced crops.

Logsdon's assertion is that this is a growing trend...that these smaller farms and market gardens are on the increase, and that food freshness, taste, and safety, are goals motivating people to go to extra effort and greater expense to get these desired ends. Megafarms, he contends, can't supply the quality that people are seeking, and don't have the advantages of economy of scale such as manufacturing has, when "all the costs are considered". Under these circumstances "it is cheaper to raise a zucchini in your garden than on your mega-farm".

His sense is that this fits a historical pattern, that as societies become more dense, the result has been more numerous and smaller-scaled farms. Small scale farmer-gardeners are simply following this pattern in marshaling entrepreneurial skills to attract the attention of supermarkets with products they are best suited to provide, such as exotic vegetables and value-added items like edible flower salads. Gene Logsdon shares the view with author Jane Jacobs, who in her book The Economy of Cities inverts the conventional wisdom that rural economic bases begat urban centers: "...Quite the opposite is true...rural economies including agricultural work are directly built on city economies and city work".

The general idea suggests that the demand for fresher, safer foods, more exotic crops, and even pressure to treat farm animals differently stems from urban values, and that owing to a historical "I made you" relationship, these urban generated demands will have to be considered seriously by the rural sector.

Although willing to become convinced by this, I didn't feel that I was on to something until I found some supporting analysis, this time from the USDA's Economic Research Service. While in Washington, I met Ralph Heimlich, one of the authors of a report entitled "Metropolitan Agriculture:Farming in the City's Shadow", released this fall.

Through this work I found that land use and development patterns are changing in American metropolitan areas, in a way that has a significant impact on agriculture. The character of this growth is pressing demographers to stretch the prior definition of "metropolitan" that the Census Bureau has used.

A predominantly homogenous pattern of tight rings of suburban development typical of the late '50s and '60s has, in the last ten to twenty years, given way to a more dispersed pattern of clumped growth, of clusters of structures and expanded small towns that preserve more open space than the preceding pattern.

As the report describes it, the new growth was "occurring beyond the existing metropolitan fringe in areas with no urban centers comparable to the growth nodes of earlier decades. And unlike the earlier development pattern, which took land out of farm use, the new development patterns allowed more land to be kept in farms".

If we could consider the city as a giant cellular organism, it would appear as if the outer edge has now a very different message guiding its expansion. Rather than continue outward with the tight layers like the annual growth rings of trees, the new message is to preserve the areas that are being expanded into in some of its original rural form...The source of this message is what I find most interesting to contemplate...those choosing to inhabit the outer edge are no longer solely dependent upon or satisfying their needs through the urban core:

"Development has been moving away from the cities in a dispersed, low-density pattern that spreads a network of residences, retail stores, and industrial and office parks across a broad area...This type of development is populated partly by commuters able to live farther from urban centers because of improved transportation systems, but increasingly by people who live, work, and shop away from the urban core. In contrast to earlier suburban patterns, the new development does not border central urban areas and can often preserve open spaces, farmland, and existing small towns by encompassing, but not replacing, them. Space remains for agriculture in this new settlement pattern, although some changes in existing farm operations may be required."

While exploring the implications of this emerging pattern, I've been led to wonder what ethic is guiding individuals to make these decisions that, in total, add up to a statistically visible phenomenon...Mentioned within the report was the tendency for these new inhabitants to become guardians of the surrounding countryside; being drawn to this more open environment they in turn become involved in farmland preservation measures and otherwise seek to restrict subsequent land development.

Although if urban expansion were to continue steadily, this might be ultimately unsuccessful as an overall strategy, the window of opportunity it creates is very timely. For it is this "metropolitan" area with holes in it that are wide enough to farm that is giving the ex-urban farmers that Gene Logsdon is writing about the chance to take advantage of their proximity to urban

areas and do their guerrilla marketing. Perhaps they are even one and the same person that makes this outward migration and attempts to become a member of this new ex-urban farming class.

In this scenario, previously untenable agricultural holdings are also likely to get a new lease on life, as a farmer still wishing to stay in farming could sell off some of his or her lands and utilize those earnings to intensify and recapitalize their operations.

In both cases, with new entrants to farming, and those that are streamlining older operations, the proximity to residential areas presents a mix of constraints and opportunities for farmers. The ERS report lists these as "increased vandalism, restrictions on spraying and farm odors, higher land values, and decreases in feed, seed, and fertilizer dealers supplying farmers" while those viewed more positively are "access to specialized markets and off-farm employment, higher farm equity, and political support for farmland protection measures."

These developments would be interesting cultural anecdotes unless they showed some measure of impact greater than emerging new sports or hobbies, which appears to be the case. Metro farms apparently accounted for 29 percent of total sales in agriculture (and 33 percent of crop and nursery product sales) in a 1982 Census of Agriculture, while using just 18 percent of the total cropland, and averaged twice the dollar per acre farm sales figure as for nonmetro farms.

While most of this analysis is based on a merging of population figures from the last census, a 1985 agricultural census, and combined with natural resource inventory data, the upcoming 1990 census will be interesting to see if it shows this to be a growing trend, as traditionally rural areas are gathered up into the redefined Metropolitan statistical areas and new urban foodsheds have the opportunity to take shape.

All the best,
John J. [Signature]

Received in Hanover 1/26/90