Valley Advocate

News

Learning How to Eat, Again

A report from the Conway School of Landscape Design imagines a future in which Northampton can achieve food security.

By Mark Roessler Thursday, February 17, 2011

At the turn of the last century—more than 50 years before Interstate 91 cut through the state and decades before the Valley was even known for its "Pioneers"—there lived a people whose way of life has all but disappeared. Some of us now live in the homes where these people once lived and we walk the same streets these people walked, but this rugged race of yester-year—our ancestors—were able to do something few of us can now do.

They could feed themselves.

The labels on the foods our ancestors ate weren't created by graphic designers and packed with barcodes and lists of unrecognizable ingredients. They were written in the eaters' own hands, describing ingredients harvested from their back yards or from just down the road. Instead of having to drive to the supermarket to find what they needed for their recipes, they stepped out into their gardens or root cellars. Rather than arriving wrapped in plastic and Styrofoam, the pig carved up for Sunday dinner might even have had a name.

Photo By Mark Roessler

Abrah Dresdale (left) was one of the four authors of the Feed Northampton report and Lisa Depiano (right) was one of the local agriculture advocates who commissioned the report.

According to a report published last year by graduate students from the Conway School of Landscape Design, these days "an average meal can travel 1,500 miles and change hands half a dozen times before reaching the dinner table." The manager of the Northampton Big Y estimated in the report that just 1 percent of the food in the supermarket originated from within 100 miles of the store. The report, Feed Northampton: First Steps Toward a Local Food System, was commissioned by a group of Northampton residents who wanted to know what it would take for their city to achieve "food security."

The current "global food system is dependent on fossil fuels," the report's executive summary explains, outlining the situation the report seeks to address. "From the petroleum-based fertilizers and pesticides needed, to the fuel running farming, processing, and packaging equipment, to the gasoline used for air, water, and ground transport, these nonrenewable resources are integral to every step. A food system that depends on such limited non-renewable resources is highly precarious and vulnerable to unstable prices and uncertain supplies."

The members of the ad hoc Northampton Food Security Group wanted to know what it would take to unplug from this global food production system and create one that's local. Of course, a comprehensive approach to feeding any one municipality in the region would involve coordination throughout the region, but to begin such a process, members asked these hypothetical questions: What would it take for Northampton no longer to require outside sustenance and be able to feed itself again? What would such a system look like? Was there even enough cultivable land still available for Northampton ever to feed itself?

The resulting report is a meticulously researched document that is informative and fun to read, and offers ideas that are exciting to consider.

Its findings on our current situation are sober, but its conclusions and suggestions are both inspiring and audacious. Free of apparent political agendas, attribution of blame, or ass-covering, the authors offer something that few government-generated reports of this kind manage. Instead of stale statements that don't inspire or antagonize anyone, Feed Northampton challenges the status quo and offers a cohesive vision of a future that is worth dreaming about.

The Authors

The Conway School of Landscape Design is located on a wooded hilltop just outside the village of Conway, with views of the Pioneer Valley below.

The school's 18 or 19 students each year take part in a 10-month-long intensive program. They come from diverse backgrounds—not all were architecture undergraduates—and they come from towns in the Valley, across the nation and around the globe. Instead of courses steeped in theory and technical readings, the school places a strong emphasis on practical, real-world work experience, clear communications, and the combination of engineering and design considerations with a background in the humanities.

From day one, small groups of students, closely assisted by the faculty, take on actual projects for real clients, projects that fit with the school's emphasis on sustainability. Typically, they spend their first semester on smaller, residential jobs, followed by projects that address municipalities or regions. Several years ago, the school produced a food security report for Shelburne Falls that was the inspiration for Northampton's study.

In the case of the Feed Northampton report, the client was an ad hoc group of city residents who pooled resources to finance it (see sidebar). The school, eager for its students to work on the report, also partly subsidized the project.

Before Conway students put pen to paper to begin making plans, they are encouraged to set up meetings with local stakeholders to clarify the project's goals and to complete extensive research of the landscape in question. For this report, the process resulted in a primary and secondary goal: first, "to identify appropriate land in Northampton on which strategies for food cultivation could be implemented," and second, "to identify existing resources from which to build future infrastructure for processing, distribution, waste management, and education."

The report's introduction reviews the basics of a food system (cultivation, processing, distribution, waste management and education), describes the tools used to analyze the questions raised, and then provides nine different maps that look at the city from nine different perspectives, including topography, soils, hydrology, zoning and transportation.

Noting that while the city's population has decreased by 2,000 in the past 50 years, the residential development has grown by 50 percent, these land analyses helped show the report's authors that "large-scale conventional agriculture is not suitable for most areas of Northampton.... Even the fertile Meadows where most conventional agriculture takes place may not have the capacity to feed all of Northampton. These findings have directed the design concept of this project to look to unconventional sites, to envision alternative cultivation strategies that can support Northampton's food security."

A Four-Region Approach

The suggestions in the report often appear bold and free of cynicism. The authors don't seem hindered by imagined cries of "Not in my backyard!", nor are they given to worrying overmuch about how their ideas will be received. This forthrightness, explained Abrah Dresdale—who authored the report together with fellow students Tom Jandernoa, Josiah Simpson and Michael Yoken—came out of her and her colleagues' Conway training.

"They encouraged us to be practical," she said, "but also not to be scared of the outrageous. To see real, dramatic change, people need a vision of something dramatically different."

The 80-page report, which is packed with research, diagrams and appendices, was written over several months in early 2010. Dividing Northampton into four basic areas—rural, suburban, urban and agricultural—the authors offer suggestions for how each region could maximize existing space to cultivate food. Each suggestion is supported with case studies and real-world examples, some from the city, others from further afield.

Rural: Goats and pigs

The rocky, steeply sloped rural regions of Northampton offer few opportunities for crop cultivation, the authors found. Of the 6,000 acres available, only 500 are flat enough to be tilled, and only 100 of those acres are thought to have productive soil. Instead, the report sees opportunities for animal husbandry and tree crops. There is a "large capacity to raise turkeys, chickens, rabbits, and guinea pigs due to the small feeding area required," and the many thousands of acres of forest offer "browsing potential for livestock such as goats and pigs."

For inspiration, they point to Sepp Holzer, an Austrian farmer who turned an Alpine hillside into a "food paradise. Fishponds, thousands of fruit trees, berry-producing shrubs, unusually productive vegetable patches, and herbal varieties thrive for him." The report suggests that the 240-acre Mineral Hills Conservation Area, owned by the city, could be used as an agricultural park to demonstrate strategies similar to Holzer's for transforming other rocky slopes.

Suburban: Grow produce on lawns

Northampton's suburban districts used to look a lot like its agricultural ones, the report notes, "but farmland has diminished steadily over the past sixty years as development has spread from downtown." In terms of layout and design, many of these housing developments follow the national trend for the last half century: "large lawns, houses grouped together in pockets isolated from other neighborhoods, and often centered around a cul-de-sac."

Given that the land these developments are built on is "an outwash loam, which is fairly well suited for cultivating food," the report suggests residents turn their well-manicured (but largely empty) lawns into cultivated "oases of abundance." Cul-de-sacs in these developments can become a kind of agricultural commons used for such things as a community compost operation, tool shed and greenhouse.

Such a reuse vision, states the report, runs counter to a current "culture that values large lawns instead of front yard gardens, with assumptions that food cultivation and residential living are mutually exclusive," and looks to the Edible Estates project created by Fritz Haeg in California for inspiration. In that project, residents were able to fill their front lawns with enough produce to feed themselves and have enough left over to share.

In England, another project known as Landshare connects landowners who have unused property with farmers (or apartment-bound gardeners) looking for land to cultivate; both landowner and farmer share in the harvest. Already 46,000 people are involved, and the project is expanding.

Either approach stands to address another dynamic that afflicts many suburbs: "suburban neighbors tend to interact less than their urban counterparts and have less public space in which they can fraternize, [and which they can] collectively care for, or mutually benefit from."

Urban: Rooftop farming

The section on how Northampton could better utilize its urban areas for food production is the most robust in the report, offering many examples of projects and specific techniques best adapted to urban uses. Along with methods for farming on small lots or rooftops, the authors also suggest reconsidering the use of public and corporate spaces now most commonly frequented by lawn mowers. Public schools, universities and corporations with large lawns or playing fields could begin cultivating them. The report describes several projects in which community farming programs have been turned into educational and job-training opportunities for high-risk populations.

The authors recognize that many individuals and organizations in the city are already adopting these suggestions on a small scale, but the social and economic networks tying these efforts together are still in their infancy or nonexistent.

Agriculture: Food for humans

The most profound disconnect that stands in the way of Northampton achieving food security, however, is between the city and how it relates to the 4,000 acres of farmland, known as the Meadows, that stretches between I-91 and the Connecticut River. Once Northampton was known as the "Meadow City." Now less than 1 percent of the city's population resides there, and approximately 95 percent of all the food grown there is shipped elsewhere. During a relatively short growing season, farms there currently produce "a narrow range of fossil-fuel intensive crops, mostly potatoes and crops not fit for human consumption—corn silage, soybeans and hay."

Recognizing that this dynamic is a result of our current food system and market conditions, the authors recommend a series of remedies that would expand the productivity of the Meadows farms while attracting local dollars at the same time. Looking to the Four Season Farm at Cape Rosier in Maine, the report illustrates how farmers there, under similarly challenging New England conditions, have been able to farm diverse crops during all seasons of the year. The authors suggest that Northampton consider developing a local food incentive program: "With the help of outside grants initially& the city could offer subsidies to a few farmers to grow a greater diversity of edible crops and sell them to local food-processing businesses, restaurants and vendors."

Calculating "Enough"

In all, the report identifies approximately 10,375 acres of land within Northampton that could be repurposed to cultivate food. Added to what already exists, this would leave approximately 14,775 acres—almost half the size of the city—available to address food security issues.

Would this be enough to feed everyone in the city?

That, the report states, "depends on many factors, including particular site conditions, cultivation methods, the composition of diets, the timing of planting and harvesting, and the types of crops and animals raised." But with these qualifications, and utilizing the work of other researchers, the report offers an estimate.

Christian Peters of Cornell University's Department of Crop and Soil Sciences developed a system to measure how much land per person it would take to meet different kinds of diet requirements. According to the Feed Northampton report, he "determined that, depending on the amount of meat and fat in a person's diet, there is a five-fold difference in the per-person annual land requirements of the various diets [he examined], from 0.45 acres per person for a low-fat vegetarian diet to 2.13 acres per person for a diet high in fat and 12 ounces of meat per day."

By these numbers, given an average American diet that includes 5 ounces of meat a day, it would require 1.06 acres per Northampton resident to feed everyone. In other words, the city could only feed 47 percent of its residents.

If everyone in Northampton ate only a vegetarian diet, though, hypothetically 111 percent of the city's population could be fed on the available land.

A Once and Future Local Food System

In the final section of the Feed Northampton report, recognizing that growing enough food to eat is only a first step toward creating a viable local food system, the authors suggest a new infrastructure to process and distribute the food that could be grown here.

In addition to the loss of local land suitable for agriculture, our modern, industrialized food system has also led to the dismantling of our localized food storage, processing and distribution systems. Should the farmers in the Meadows decide tomorrow to diversify their crops and serve only local food needs, there would be nowhere for their produce to be stored and no system in place for getting it to residents.

There is no facility in Northampton to mill thousands of acres of wheat into flour, or cider press big enough to handle the demand of the entire city. Further, with food supplies being managed today on a national scale, there is no local oversight for determining, meeting or coordinating the needs of local farmers.

The report recommends a system of food processing hubs situated throughout the city in proximity to where food is being grown. Such hubs—facilities for food processing, storage, distribution, waste management and education—could be customized to serve multiple functions or any single one.

"The concept of the hub is not new," the report notes. "In fact, looking back to nineteenth-century agrarian New England, we find that many

farms did not have their own cider house, mill to grind flour, or boiler for maple sugar. There were independently owned local hubs that offered a niche service to farms for processing crops into enhanced food products."

Further, the report points to another relic of the past that could offer a modern solution for networking farmers: the local grange. "Until recently," it notes, "most farming communities had a grange, which served as a meeting place to discuss common difficulties and potential partnerships; a place for exhibiting choice crops; and a seed exchange."

Just as they found unlikely places in the city to produce food, the authors of Feed Northampton were able to find opportunities for creating hubs and granges hiding in plain view throughout the city.

With only minor upgrades, the industrial kitchen at Smith Vocational High School could be certified by the Board of Health as a community kitchen that "cultivators could use to process value-added goods." Additionally, the school's facilities could serve as a site for a mobile slaughterhouse, large-scale compost facility, and a food-distribution hub.

Certified community kitchens already exist in many of the city's churches, the report notes, and fields recently donated to the city by former city councilor Rita Bleiman would also make a good location for a composting facility. The Hampshire County Jail and Hospital Hill would also make suitable sites for potential hubs, but the most obvious site with the biggest potential impact is the Tri-County Fairgrounds, situated near I-91 between downtown and the meadows, the report points out.

As with many county agricultural fairs throughout New England, Northampton's Tri-County Fairgrounds once served as a location where the community could come together to celebrate and enjoy the works of area farmers. As our food systems became national, though, the emphasis on local agriculture has diminished, and Northampton's fairgrounds have started to serve other needs and audiences.

Instead of oxen pulls, there have been monster truck shows, and whereas a prize Holstein from Hadley may have once been the star animal attraction, in recent years the Tri-County Fairground promoters have opted for exotic Australian animals and Bengali tigers. Recent efforts to add a convention center to the site, along with a $40 million upgrade to facilities, have appeared to chiefly cater to events such as crafts fairs and an annual equestrian show—events that seem to depend more on using I-91 as a resource than the adjacent Meadows.

The Feed Northampton report imagines the future and functionality of the fairgrounds differently.

By adopting the recommendations in the report, the authors suggest the city could turn the fertile Meadows into an agricultural attraction of its own, and the fairgrounds could offer visitors a front row seat to a working local agriculture system. With a diagram showing how such additions could be added to existing redesign plans, the report's authors suggest the fairgrounds could potentially serve the residents of Northampton as "a mobile slaughterhouse; distribution warehouse including a walk-in refrigerator, produce aggregation and processing depot, and over-winter food storage; a community greenhouse for edible starts; and year-round farmers' market."

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Though the Feed Northampton report was not commissioned by city officials, it several times references two reports issued in 2008 that were published with the city's close involvement and blessing: The Sustainable Northampton Comprehensive Plan (authored by the City of Northampton and released in January of that year) and Envisioning Sustainable Northampton (prepared by the Notre Dame School of Architecture and Northampton Design Forum and released in December).

While the authors of Feed Northampton recognize that the city's "comprehensive" plan for sustainability neglected to list any measures for food security (and hardly addressed agricultural issues at all), they still appear eager for their work to be recognized in the company of that plan and the later report. This may have been a sage political gesture, but choosing to declare kinship with these other works may be the one (albeit small) shortcoming of the Conway School's report.

Whereas Feed Northampton stands on its own merits, providing examples of how the ideas the researchers endorse have been successful elsewhere and providing practical suggestions for next steps, the other reports seem to be products of political posturing without much practical application. This lack of vitality or applicability in the city's sustainability plan was a concern shared by several of the Notre Dame students with this reporter, and yet, in order to receive local officials' imprimatur on their work, the students and forum, in turn, needed to adopt and endorse the city's plan, going so far as naming their work after it. Years later, both the city-endorsed reports are occasionally referred to as justification for new initiatives, but both have largely been forgotten and offer little guidance or vision to anyone.

Since it was published last year, Feed Northampton has already inspired several municipalities and universities to ask the Conway School and the report's authors about creating similar reports for their own localities. The report has also already had a significant impact on the Paradise City. Last month, the members of Grow Food Northampton (many of whom were part of the group that commissioned the report) managed to purchase 117 acres of farmland in Florence, where they will host at least one community farm and create many educational opportunities for residents who want to contribute to the city's food security.

The report can be downloaded for free as a PDF from http://www.issuu.com/abrahdresdale/docs/feed_northampton.A printed version is available from lulu.com for $22.10. Find it by searching for Feed Northampton.