

# University-based Models for Sustainable Food Systems

*Summary by David Gottesman*

## *Panelists*

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In discussing the relationship between food and sustainability, three main points must be made. First, food is fundamental to sustainability. For a long time food has operated in the shadows of energy, LEED construction, and other physical aspects of sustainability. In reality, however, one cannot have sustainability without addressing food and agriculture. Second, food cannot be dealt with in isolation; there is a positive and necessary synergy between other aspects of sustainability and food and agriculture issues. Finally, institutional responses to food, agriculture and nutrition must be developed as part of any sustainability effort in higher education.

## **THE RUNAWAY INDUSTRIAL FOOD SYSTEM**

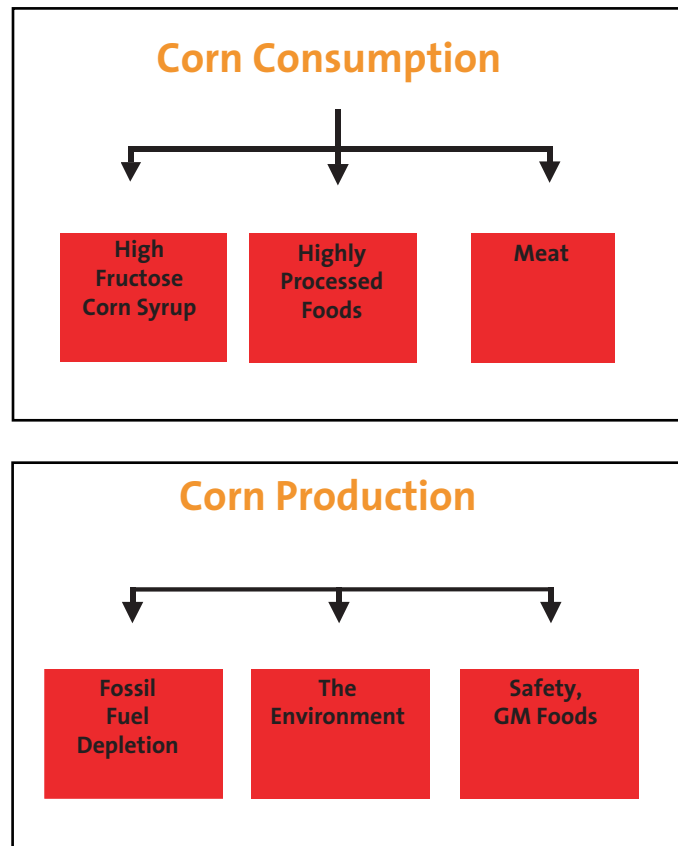
Food is a major driver of public health issues as well as the economic underpinning of the public health system. Food production clearly impacts land use and consequently carbon cycles, biogeochemical cycles and ecosystem health on both a local and global scale. Water use patterns are also driven by food production. These water-food relationships have bred tensions around the world that will continue to grow as the resource becomes scarcer. As agriculture becomes more mechanized and energy-intensive, food production becomes an energy sink as well.

In the U.S., food production receives an enormous amount of public funding, including \$248.6 billion in the 2002 Farm Bill. By most accounts, these public funds are not well spent, leading to tremendous inefficiency, corruption and ill health throughout the food system. Wastefulness in U.S. agricultural trade and subsidies impacts international food markets and often negatively affects developing countries by disrupting local and regional food systems and by undermining the economic viability of agricultural enterprises.

Finally, food is central to culture: it gives people a sense of place, an experience of cultural diversity, and an identity. A runaway food system that continually seeks to consolidate and homogenize global markets undermines the diversity of agriculture, food enterprises, and cuisine and therefore culture and sovereignty.

Another negative consequence of the runaway food system is an unprecedented increase in the transportation and energy consumption involved in the global food system. The increasing average distance food travels from farm to fork must be stemmed through comprehensive approaches that begin to build a more sustainable food system.

**Figure 1** The health and environmental effects of subsidized corn production in the U.S.



There is a growing disconnect between food consumption and food production in the U.S. One contributing factor is that American culture itself is transforming from a participant effort, or what Slow Food founder Carlo Petrini refers to as “co-producer,” to a consumer-based interaction. Consumers are concerned with price and convenience, and the industrial food system appears to be providing a cheap and plentiful food supply. However, the ecological, economic and public health impacts of this runaway food system have reached critical proportions, including both a domestic

and global obesity pandemic that scientists have characterized as a global catastrophe on par with climate change. Our industrial agribusiness production system is a major driver of unsustainability and a declining quality of life. To have a truly sustainable food system the role of “participant citizens” needs to be redeveloped.

The figure below shows how highly-subsidized industrial monocultures of corn supply the food system to create demand that results in ecological, economic, and nutritional damage on a national and global scale.

## **CAMPUS-LEVEL APPROACHES TO MAKING FOOD PRODUCTION MORE SUSTAINABLE**

The approach developed by the Office of Sustainability at the University of New Hampshire (UNH) to this cultural re-development is centered around health and integrity as first principles of sustainability. Initiatives are organized around four central systems and four core functions. The four systems are the climate system, ecosystems, food systems, and cultural systems. The four functions are curriculum, operations, research and engagement, referred to by the acronym CORE. It is imperative to sustain health and integrity within and across each of these systems. In the university setting, the focus is often only on the structural and operational aspects of these systems. To bring this down to the ground, curriculum, operations, research and engagement must all be addressed in an integrated fashion. The heart and soul of the university – the students and the learning – must be the focus of the real transformation.

The experience at Yale suggests that one of the best strategies for achieving this transformation is to pursue partnerships with scientists. Approaching a scientist and asking him/her to investigate a particular aspect of the link between food production and consumption is a valuable means of disseminating this message, since these experts have credibility in both their fields and in society at large. While this kind of relationship may seem implausible at first, there are a couple of guidelines that should be followed to ensure their effectiveness. First, we should look for partnerships with graduate students who have the expertise and drive to get involved in a project. Beyond infusing enthusiasm and vigor into the study, graduate students can be employed for relatively little money, which helps answer the eternal question of funding. Second, it is essential to frame the issue at hand within the broader context of society and sustainability for maximum impact. For example, instead of developing a project to investigate a general trend, the project should be framed as an evaluation of a positive intervention.

The University of New Hampshire can provide a number of examples of institutional methods for creating a sustainable food system through its “Food and Society Initiative,” which began in 1999. At the outset, UNH went through a four-year series of listening exercises that enabled it to connect with various constituencies in the community. At the beginning, the initiative met with internal resistance, but over time the group was able to certify 30 acres of university land as organic. An organic garden club and organic farming course soon followed, with 100 students in each. The organic garden club now sells food to the dining halls, stocks an on-campus farmers

market, and donates food to local food kitchens. UNH now has more than 300 acres of certified organic farm land, with more in transition.

The dining system at UNH has also made efforts to embrace the sustainable food efforts, hosting local harvest dinners each year. At these events farmers from the community come to share their products and experiences. These dinners provide valuable interaction between the community and the students.

Another successful UNH initiative has been the “farm to school” program, which was started to try to bring local apples to New Hampshire schools. This came about at a time when local apple orchards were failing while area schools bought apples from Washington State. Due to the farm to school program, 260 schools in New Hampshire now buy local apples and the program is expanding to other crops. In addition, this program has helped to get teachers thinking about the cafeteria as another learning environment.

Additional projects ongoing at UNH include the first organic dairy research farm at a land grant university in the country, a strategic planning process for New Hampshire food security, collaboration with the Northeast Sustainable Agriculture Working Group, and plans for a new undergraduate dual major in EcoGastronomy that is part of a collaboration with Slow Food International. The dual major in EcoGastronomy is designed to integrate sustainable agriculture, food entrepreneurship, and nutrition through interdisciplinary, experiential, and international teaching, experience, and learning.

## **THE BOTTOM LINE: ENSURING SUFFICIENT LAND FOR SUSTAINABLE FARMING**

Underlying the challenges and lessons described above are some concrete factors which must be considered while designing sustainable food systems. Of particular concern is farm land loss, which poses a direct threat to the agricultural farm base needed for local organic farming. For older farmers, the profit to be gained from selling their land for residential construction often proves all too persuasive. To counteract this financial incentive, measures must be taken to facilitate land transfers to the next generation of farmers. Such a provision would allow sustainable food systems to continue their mission of providing communities with locally-grown agriculture, educating students about environmentally-responsible farming, and working to temper the runaway industrial food system.