

Feeding the World Intelligentlyⁱ

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“American Farmers Feed the World!” This is a popular assertion in farming areas of the U.S. The myth persists, even though it is being challenged for a variety of reasons by critics of industrial agriculture.¹ Even agricultural academics and agribusiness professionals promote the idea that only a technologically advanced, industrial agriculture will be capable of providing enough food to meet the food demands of a growing global population. We are told that so-called developed countries, such as the United States, may need to double agricultural production by 2050 to meet global demands for agricultural products, including increases in projected food demands.² Genetic engineering is just one of many technological fixes in the Food and Agricultural Organization of the United Nation’s (FAO) *Climate Smart Agriculture* program, which is touted as the solution to sustainable increases in production and reduced greenhouse gas emissions during an era of global climate change.³

However, a controversy exists within the FAO regarding the most promising strategies for eliminating hunger globally. Fred Kirschenmann of Iowa State University cites four recent United Nations report that “all point to new, practical directions for solving the problem of hunger.” They all conclude that “new technologies and increased yields in the industrial world may play a minor role in meeting this challenge. The central issues that remain to be addressed are empowerment of local farmers using agro-ecological methods, making food accessible to all (especially the poor), investment in agricultural knowledge adapted to local ecologies, multi-stakeholder participation and the empowerment of women!”

Virtually all of these UN studies recognize that farmers around the world are already producing enough food calories to provide everyone with enough food; according to one estimate, 2700 calories a day – well above the 2100 minimum for a healthy diet.⁴ The experts also agree that about 30% of global food production is lost or wasted.⁵ Food waste in the U.S. amounts to about 40%. Most experts also recognize that food production is not the top priority for industrial agriculture producers. About 40% of the U.S. corn crop has been used for ethanol production in recent years and the vast majority of the remainder of U.S. corn and soybean crops are used to feed livestock – using land that could have produced food for hungry humans. In addition, only half of one percent of U.S. agricultural exports go to the 19 countries of the world with the highest levels of hunger.⁶

Feeding the world intelligently will require a fundamental change in thinking, even among the most ardent critics of genetic engineering, corn ethanol, concentrated animal feeding operations, “free trade” agreements, and global industrial agriculture in general.

ⁱ Prepared for presentation at the Tennessee Local Food Summit, organized by the Barefoot Farmer, hosted by Tennessee State University, Nashville, TN, December, 1-3, 2017.

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First, we need to understand that hunger today is avoidable or discretionary, rather than unavoidable or inevitable. With the exception of unusual circumstances, such as wars or insurrections, floods, droughts, or natural disasters, most countries of the world could produce enough food to meet the basic needs of their own people. Globally, farmers could produce more than enough food to provide everyone in the world with enough food. They could also provide more than enough *good* food – meaning food that is safe, nutritious, and healthful – if we reduced food waste, stopped using food for fuel, and fed less grain to livestock. Farmers could also produce enough good food without degrading the soil, polluting air and water with chemical and biological wastes, or exploiting farmers, farm workers, or others in the food industry.

A recent meta-study by an International Panel of Experts, *From Uniformity to Diversity*, cited more than 350 studies and described the scientific evidence supporting a global shift from industrial agriculture to agroecological farming methods as “overwhelming”.⁷ They address the issue of food security specifically, indicating that organic and other sustainable farming systems could meet global food needs and increase yields the most in areas of the world with greatest food needs. According to various reports of the Food and Agricultural Organization of the United Nations, small, diversified family farms already provide food for least 70% of the global population and could double or triple yields without resorting to industrial production methods.⁸ People face the threat of “discretionary” hunger in the midst of both current and potential food abundance because our collective lack of caring.

Second, we need to accept the fact that eliminating hunger cannot be left to the indifference of markets, the vagaries of charity, or impersonal government programs. Markets provide food for those who are able to earn enough money to pay market prices, which inevitably excludes many who need food. Even in the U.S., more than 15% of the population is food “insecure” and more than 20% of our children live in food insecure households.^{9, 10} Markets allocate food based on scarcity, not necessity. Poverty is an obvious contributor to hunger, but even if everyone in the world had a “livable income,” a market driven food system would soon entice those with minimum incomes to buy cheap, junk food. A recent global report by 500 scientists from 50 countries concluded: “obesity is [now] a bigger health crisis than hunger.”¹¹ Everywhere in the world where industrial food systems have displaced subsistence farmers and community-based food systems, people are forced to rely on markets for their food and diet related health issues have followed – obesity, diabetes, heart disease, hypertension, and diet related cancers.

Still, few global food experts seem willing to challenge the conventional economic thinking that markets will somehow provide food security for both present and future generations. In his classic book, *The Great Transformation*, economist Karl Polanyi details the historical consequence of “commodifying” land and labor.¹² Prior to the “enclosure movement” of the 16th Century, community groups had common access to the land. Land was freely available to everyone to use to meet their basic needs, including their need for food. Uses of the land for various purposes were determined by community consensus, not by markets. *Unavoidable* or absolute poverty and hunger existed in many areas prior to the enclosures, as it does in some parts of the world today where land is held in common. However, *discretionary* or relational poverty and hunger only began when land was removed from the commons. The real “tragedy of

the commons” was not that the agricultural commons was destroyed by overuse by self-seeking individuals but that removing land from the commons created a new kind of poverty and hunger.

Prior to the enclosures, market transactions were limited primarily to international trade. The primary means of meeting basic physical or material needs were through subsistence farming and local gifting economies. In gifting economies, goods and services were not bought or sold but instead freely given without explicit agreements concerning immediate or future rewards or reciprocity. Barter was limited primarily to trade among people who didn’t know each other, in some cases, people who were otherwise enemies. However, international markets had proven very effective in increasing the “wealth of nations,” as suggested by Adam Smith. Individual countries could capitalize on their economic comparative advantages by trading with other nations. Enclosing the commons would allow individuals to capitalize on the economic comparative advantages within and among their local communities. At least, that was the rationale for taking land out of the commons.

First, land had to be privatized and commodified so it could be bought and sold and thus reallocated so those who were more efficient farmers would end up with access to more land. Use of various parcels of land by specific individuals would then be determined by market competition rather than community consensus. The commodification of land essentially forced the commodification of labor. Those without access to land for food were forced to sell their labor to employers, not only to thrive economically but to survive physically. The fundamental problem of commodifying land and labor arises from the fact that people are inherently unequal in their ability to earn money, which is necessary to have money to spend in a market economy.

We all have different physical and mental capacities, different aptitudes and opportunities, and different initial endowments of financial or physical resources. Nevertheless, all people in general have the same basic needs for food, clothing, shelter, and other necessities of life. The inequities of poverty and hunger are inevitable symptoms of market economies, which by their very nature reward people in relation to their contribution to the economy, not according to their needs. Some people will always be unable to earn enough money to buy enough good food. We cannot expect increasing global food production or even reduced global food demand to alleviate hunger unless we address the global challenges of economic and social inequities.

Thus far, no means have been found to eliminating hunger in market economies. Charity is discretionary and often discriminatory. Those considered “worthy” may get food, assuming there is enough charity to go around, while those judged to be criminal, addicted, lazy, unmotivated or otherwise “unworthy” are often left to fend for themselves. Government programs dating back to the English Poor Laws of 1601 have failed to solve problems of persistent hunger. “Impersonal” government programs can never adequately address problems arising from a lack of “personal” concern. Hunger is a reflection of systemic problems imbedded deeply within our food system, economy, and society. Elimination of hunger will require a comprehensive approach that addresses the logistical, economic, demographic, social, and cultural challenges of hunger.

Admittedly, the challenge is formidable but it is not unsurmountable. Innovations that solve big, systemic problems such as hunger must begin by finding points of leverage where small, doable actions can lead to large, seemingly impossible effects – like the small trim tab that turns

the rudder of a ship, causing the whole ship to change direction. I have proposed a specific approach to addressing hunger in hopes of stimulating a dialogue as to how best to meet the challenge.¹³ Local commitments to “community food security” could well provide the trim tab for the systemic changes necessary to effectively address the challenge of discretionary hunger.

One means I have proposed for meeting the challenge of community food security is a “Community Food Utility” or CFU. A public utility is a business established to provide a specific “public service.” They are commonly used in the U.S. to provide water, sewer, electricity, natural gas, communication systems, and other essential services. While existing utilities ensure universal access to essential services, they do not ensure that everyone can afford enough of those services to meet their basic needs. Community Food Utilities would not only ensure universal access to food but would also ensure that everyone has enough *good* food to meet their basic needs – as an essential public service.

CFUs could fill in the persistent gaps left by markets, charities, and impersonal government programs. In 2014, U.S. households at middle income levels spent approximately 15% of their disposable incomes for food.¹⁴ One approach to ensuring affordability would be to ensure that every household in the community has the equivalent of 15% of the community’s median household income to spend for food. Those households falling below the income threshold could be provided with opportunities to make up the shortfall in income needed for food by contributing local public services. Public services of both economic and non-economic values would be accepted equally. CFU payments for local public services would be based on hours of service rather than economic value, giving everyone an equal opportunity.

CFU payments for services would be made in Community Food Dollars (CF\$s), which could be used only to buy food provided by the CFU. Priority in procuring food for the CFU would be given to local farmers willing to meet local-determined standards that ensure safe, nutritious, appetizing foods produced by sustainable means. The CFU would serve as a “food grid” by procuring foods from non-local producers when necessary to fill in gaps in local production. Priority for non-local procurement would be given to regional suppliers who are willing and able to meet local “good food” standards.

Local farmers and providers would be ensured prices sufficient to cover their costs of production plus a reasonable profit, as is the case with existing public utilities. Prices would be negotiated between the CFU and local farmers – much as public utilities regulators negotiate with current public utilities. This would give young families who aspire to become farmers an opportunity to learn and become established in sustainable farming. Producing for a community food utility could also provide a measure of economic security for farmers who choose to expand beyond producing for the CFU and to build viable local markets for their foods among those who are willing and able to pay the full cost of good food. However, some farmers might choose to just make a decent economic living producing foods for the community food utility.

Nutrition education could be integrated into all CFU programs to help participants learn to select nutritiously balanced diets for their families and to prepare appetizing meals from the raw and minimally processed foods provided by the CFU. More than 80% of foods purchased in supermarkets and 90% of the cost of restaurant meals in the U.S. are associated with costs of

processing, packaging, transportation, energy, taxes, insurance, and services provided by food retailers.¹⁵ By spending CF\$s for raw and minimally processed local foods provided by the CFU, even the lowest income consumers would be able to afford more than enough good food.

CFU foods could be made available to participants by means that ensure physical access to food for everyone and minimize food waste due to a lack of adequate refrigeration or food storage. The needs of children and the elderly and disabled could be given special consideration. The CFU might operate a “community food market” where those without special needs could buy CFU food using CF\$. For those lacking ready access to transportation or refrigeration, delivery options could include periodic deliveries of individually selected CSA-like “food boxes.” Home delivery of foods for specific meals could be provided for those that cannot be accommodated with other options. Meal preparation guidelines and basic refrigeration and storage could be provided to accommodate the various delivery options and specific needs to participants. The CFU could coordinate its functions with local charities and impersonal government programs, such as “food stamps” and “school lunches” to avoid duplication.

As local production expands beyond levels needed to address hunger, the CFU could offer good food to the general community at prices covering full costs of production plus a profit for the CFU. However, the CFU would require continuing commitments of local tax dollars. The key difference between the CFU and existing government programs would be that local government officials would feel a personal sense of connection with people in their community, and community members would feel a personal sense of responsibility to help each other. The CFU would operate as efficiently as possible, but would not compromise its commitment to ensuring that all in the community have enough good food to meet their basic needs. As “trim tab” communities eliminate hunger, the “rudder” of public policy will begin to shift, and the “ship of state” will turn toward global food sovereignty. Eventually, there will be good food for all, not just the hungry. However, hunger cannot be eliminated as long as the quest for economic efficiency deprives the poor of their basic human right to enough good food.

I believe the first step toward eliminating hunger will be to accept the “right to food” as a basic human right. Accepting enough good food as a basic human right may sound like a radical idea in the U.S. However, the right to food is the cornerstone principle of the global movement called *food sovereignty*. The term was coined in 1996 by Via Campesina, which is an alliance of 148 international organizations.¹⁶ Food sovereignty is defined as “the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems.”¹⁷ While the current food sovereignty movement focuses on change in policy at national and international levels, the basic principles are just as valid as guides to community food security.

Ensuring sustainably produced food as a basic human right should also become a guiding principles of the sustainable agriculture movement. Sustainability is the ability to meet the needs of the present without diminishing opportunities for the future. The sustainable food movement has been labeled as “elitist” because sustainably produced foods have not been accessible or affordable to people with lower incomes. Ensuring food for future generations has been given priority over meeting the basic food needs of all in the present. A commitment to eliminating hunger locally could do much to legitimize and energize the sustainable food movement.

Some have been quick to label the idea of a community food utility as socialist or communist. Interestingly, they seem to have no problem with public utilities that provide them with access to electricity, water, sewer, or cable TV. Admittedly, there is a movement in the U.S. to “privatize” most public services. Privatizing legitimate public services is far more un-American than creating public utilities to ensure a “right to food.” I personally believe our acceptance of hunger in America represents a fundamental denial of basic “constitutional rights.”

Admittedly, the U.S. constitution doesn’t mention the right to food security. However, the rights of the people of the United States are not limited to those rights specifically named or enumerated in the Constitution. In fact, the 9th amendment to the Constitution states: “The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.” These “other” rights, in addition to those named, are to be “retained by the people.” Some of those other rights were later added to the Constitution, such as the prohibition of slavery and women’s right to vote. Others have been interpreted by the courts to be covered under enumerated rights, such as freedom of speech and religion and the right to privacy. Fundamental rights such as self-determination and self-defense have simply been accepted without challenge – as self-evident.

The American Declaration Independence names some rights considered so self-evident they were not enumerated in the Constitution. It states: “We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness.—That to secure these rights, Governments are instituted among Men.” What can be more important to the basic right to *life* than the right to clean air, pure water, and enough safe, healthy food to support a healthy, active lifestyle? Without enough good food, there is no opportunity to claim the benefits of the other enumerated rights. The fundamental purpose of government is to protect our basic human rights.

I’m not naïve. I know the U.S. government isn’t going to accept enough good food as a constitutional right, at least not anytime soon – or soon enough. However, according to the U.S. Constitution, this should not prevent people from doing so in their local communities. The 10th Amendment of the U.S Constitution states: “The Powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, *or to the people*.” Our federal and state governments have failed to use their power, or perhaps don’t feel they have the power, to claim enough good food as a constitutional right. Thus, it’s up to “the people” – coming together in their local communities to ensure enough good food for all.

Idealistic? Perhaps. However, I was asked to address the question of “how to feed the world *intelligently*.” I simply do not believe it is very intelligent to keep doing the same kinds of things people have been doing over the past 400 years to deal with hunger – and expecting the results somehow to be different next time. Markets can do, and have done, many things better than any other means. But, there are some things that markets simply will not, cannot, and were never intended to do. That’s the reason civilized nations have governments – not just national or state, but also local, community-based governments. If we really care about those who are poor and hungry, we must find the courage do the things we can do in our local communities, those small “trim tabs” of change. We then can at least begin the process of “feeding the world *intelligently*.”

End Notes

- ¹ Dan Charles, NPR Morning Edition, “American farmers say they feed the world, but do they?” September 17, 2013. <http://www.npr.org/sections/thesalt/2013/09/17/221376803/american-farmers-say-they-feed-the-world-but-do-they> .
- ² High Level Expert Forum, Food and Agriculture Organization of the United Nations, “How to Feed the World – 2050,” October 2009. http://www.fao.org/fileadmin/templates/wsfs/docs/Issues_papers/HLEF2050_Global_Agriculture.pdf .
- ³ Food and Agriculture Organization of the United Nations, “Climate Smart Agriculture,” <http://www.fao.org/climate-smart-agriculture/en/> .
- ⁴ Mercy Corps, “Quick Facts You Need to Know about Global Hunger,” March 18, 2015. <https://www.mercycorps.org/articles/quick-facts-what-you-need-know-about-global-hunger>
- ⁵ Food and Agriculture Organization of United Nations, SAVE: Global Initiative on Food Lost and Waste Reduction, “Key Facts on Food Lost and Waste You Should Know,” <http://www.fao.org/save-food/resources/keyfindings/en/> .
- ⁶ Share World Resources, “Think U.S. Agriculture Will End World Hunger, Think Again?,” <http://www.sharing.org/information-centre/reports/think-us-agriculture-will-end-world-hunger-think-again#sthash.qnWMIvHz.dpuf>
- ⁷ International Panel of Experts on Sustainability – *Food, From Uniformity to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems*, June 2016, page 6. http://www.ipes-food.org/images/Reports/UniformityToDiversity_FullReport.pdf
- ⁸ United Nations Environmental Program, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2010, www.unep.org/greeneconomy .
- ⁹ CBS documentary, “Hunger in America,” 1968, <https://www.youtube.com/watch?v=h94bq4JfMAA>.
- ¹⁰ Alisha Coleman-Jensen, Christian Gregory, and Anita Singh, “Household Food Security in the United States in 2013,” Economic Research Report No. (ERR-173) p 41. <http://www.ers.usda.gov/media/1565415/err173.pdf> .
- ¹¹ Danielle Dellorto, “Global report: Obesity bigger health crisis than hunger.” CNN News, December 14, 2012 <http://www.cnn.com/2012/12/13/health/global-burden-report/> .
- ¹² Karl Polanyi, *The Great Transformation; The Political and Economic Origins of our Time* (Boston: Beacon Press, 1944, 1957).
- ¹³ John Ikerd, The Economic Pamphleteer, “How do we ensure good food for all?” significant portions of this section were taken from the second of two related columns in the *Journal of Agriculture, Food Systems, and Community Development*. First column, August 2016, – second column, forthcoming. <http://www.agdevjournal.com/current-issue/664-ikerd-column-good-food-for-all.html?catid=230%3Acolumn>
- ¹⁴ U.S. Dept. of Agriculture, Economic Research Service, “Ag and Food Statistics: Charting the Essentials,” Aug. 2016, <http://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-prices-and-spending.aspx> .
- ¹⁵ USDA, ERS, Ag and Food Statistics, Aug 2016.
- ¹⁶ Wikipedia, “Via Campesina,” http://en.wikipedia.org/wiki/Via_Campesina.
- ¹⁷ Nyeleni Forum on Food Sovereignty, “Declaration of Nyeleni,” February 27, 2007, <http://nyeleni.org/spip.php?article290> .