What Will It Take to Change the American Food System?

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We have been asked to reflect on what it would take to change the American food system to make farming sustainable, improve public health, and advance resource conservation and environmental quality. The answer is both simple and complex – it will take changes in public attitudes, passions, and policy of a magnitude not seen since the country pulled itself out of the Great Depression.

Changing the American food system in a generation (say 50 years) will require systemic and systematic changes in every area of public policy impacting farming, agribusiness, and food manufacturing. "Systemic" in that the changes must alter how capital and income streams flow within and through the system; "systematic" in that to really work, changes must reinforce each other, creating momentum much greater than possible through a single policy reform or new program.

This assignment requires fresh thinking in two areas: the mix of policy changes that will be required to bring about fundamental change in the performance of the food system, and second, what it will take politically for such substantive changes to occur.

First I address the goals and outcomes that policy reforms must work toward. Then, I discuss steps needed to set the political stage for changes of this magnitude. Stepping back for a moment -- it is hard to imagine such policy changes occurring, at least any time soon. On the other hand, national and global political forces are at work that may come into alignment in unexpected ways for unexpected reasons.

A. Reforms Needed to Change American Farming, Agribusiness, and Food Industries – A Seventeen Point Plan

Production Sector

1. Reinvigorate public plant breeding with renewed focus on plant health and resistance to pests and pathogens and less focus on increasing the yield of pampered, over-fertilized plants.

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2. Diversify cropping patterns where monocultures have locked farmers into inherently disease, pest, and poverty inducing systems.

    - Probably the single most important change in agronomic systems from the perspective of farm profits, public health, and environmental quality.
    - A diverse range of policy initiatives and R+D and infrastructure investments will be needed to accomplish this essential goal.

3. Base federal farm program payments per acre on the efficiency of nitrogen uptake, coupled with diversity of rotations.

    - Reassure commodity farmers that roughly the same levels of public support will be offered, just under different, WTO-acceptable terms.
    - Payments per acre per year to be based on diversity of rotations and efficiency of nitrogen uptake – e.g., farmers using three-year rotations in which 65% or more of available N is captured in crops to get at least 3-X the payment per acre of a farmer sticking with conventional monoculture and N efficiencies under 40%.

4. Spread livestock out across the cultivated cropland base to provide a way to economically utilize the forages that will be produced in diversified rotations, to supply manure to enhance soil quality, and diversify farm income streams and the economic base of rural economies.

    - The dairy and beef industries must move north and east, reducing demands on limited western water resources and restoring vitality to northern grass-based livestock industries in the Upper Midwest and New England.
    - Poultry and hogs must move west from the Piedmont.

Commodity Policy

5. U.S. farm commodity subsidies must be allocated through "green-box" payments linked to diversified rotations, increased efficiency of nitrogen uptake, biodiversity enhancement, carbon sequestration, and soil and water conservation.

    - Today, a small share of payments to U.S. farmers are truly "green box."
    - Developed world ag subsidies have become—appropriately – a major global issue and are under political attack from many directions.
    - Basic commodity prices need to at least double to stimulate rural economies in developing countries and alleviate poverty-malnutrition on a sustainable basis.

Environment and Resource Conservation

6. Establish minimally acceptable standards for the efficiency of nutrient uptake (nitrogen and phosphorous) in agronomic crops, pastures, and agroforestry as a mandatory component of all nutrient management plans, CAFO permits, cost-share contracts governing manure management and disposal, and farm programs.

    - U.S. agriculture's incredible inefficiency in nutrient uptake is at the heart of many ag system problems – water pollution, hypoxia, high costs, overproduction, soil degradation, pest pressure.

7. Farming, food systems and technology must purposefully and systematically reduce the selection pressure placed on bacteria, pathogens, weeds, and insects in order to slow the rate of genetic adaptation and evolution.

    - In managing pests, resistance management entails preserving susceptible gene pools and must become a central organizing principle in the design of agronomic and pest management systems.
    - Gene-based resistance in plants must also be conserved by not relying solely on genetics in dealing with well-established pests.
    - Steps are urgently needed to understand where and how agricultural systems and technology are accelerating the rate of bacterial and viral evolution in order to assure the continued viability of mammals within the tree of life.

8. In the west, acreage must shift from low-value, high-water use crops and pasture to high-value crops and drip or other highly efficient irrigation system technologies.

    - Pasture for beef and irrigated alfalfa account for a significant share of water use in California agriculture. Alfalfa hay takes almost an acre-foot of water per ton; if farmers had to pay the market value of the water, the price of alfalfa would more than double and the diary industry would quickly move east and north.

Food Safety and Public Health

9. USDA must stop accommodating mediocrity when public health is at risk. Bottom-feeders in the industry undermine the viability of companies dedicated to public health and force others to perfect the art of cutting corners in order to compete.

    - Inspections must be made more vigorous and science-based and USDA must be given – and use – new authority to shut down plants producing unsafe food.
    - Penalties for HAACP violations must be increased dramatically and imposed without remorse.

- A "three-strikes and your out" policy should be adopted for processing and manufacturing plants. The process to get a plant back online should be rigorous, thorough, and uncompromising in terms of improved capacity to assure food safety standards are met.

10. Phase out sub-therapeutic use of antimicrobials in animal production, as well as any other drug-related crutches for high-stress, disease inducing and inhuman animal husbandry systems.

    - Encouraging progress is being made toward this goal; the UCS report "Hoggin It" helped break the dam of denial and the medical community is now effectively engaged.

11. Government should work within international organizations to raise the food safety bar governing global trade in agricultural commodities and processed food products; private companies should do the same within their supply chains.

    - Global food supply chains are here to stay. The challenge for public policy and consumer activism is to make them accountable for impacts on people, resources, and communities.
    - Reaching consensus on "fair" wages/returns remains a major stumbling block and is a necessary step to define – and fight -- exploitation.

12. Americans need to get real about diet and health and the government must play a much more aggressive and effective role in getting people to take personal responsibility for public health.

    - Responsibility for setting dietary guidelines and carrying out nutrition education should be shifted from USDA to HHS.
    - The dairy industry should be taken to court over their "three-a-day" program.
    - If USDA cannot muster the political will to say "no" to the fat, soda, and sugar lobbies, the Food Stamp, WIC, and school lunch programs should also be moved from USDA to HHS.
    - Get soda and candy bar machines out of schools and legitimate, non-commercial nutrition education into schools.

Markets and Competition

13. Congress must direct USDA to take whatever steps are needed to assure that at least two-thirds of all undifferentiated commodity crops and livestock are sold in openly competitive markets.

    - This is a necessary first step toward shifting profit back down to the farm. Other steps will be needed, but open and competitive pricing must come first.
    - Ban packer ownership of livestock and vest responsibility for human health and environmental problems with integrators, not contract farmers.

14. Government must hold corporations accountable for their actions and enforce laws designed to protect the interests of workers, investors, suppliers, and communities; tax law must be reformed to eliminate deductions and shelters for inherently exploitive activities, to reward innovation in food safety and quality assurance, and to encourage employee ownership and profit sharing.

    - Big corporations will continue to control the majority of the food industry for the rest of our lifetimes and probably the lifetimes of our kids, so to change the food system, we have to change corporate behavior, policies, and priorities, and to do that, we have to change cost structures and profit centers.

15. Livestock industry infrastructure must be restored where it has been dismantled so that small and mid-scale operations can cost-effectively move products through a variety of market channels.

    - Assure that there is an accessible USDA-certified abattoir in every rural county, as one of many steps needed to spread livestock back across the agricultural landscape.

Technology and Intellectual Property

16. Fix the mess with intellectual property rights over living organisms and plant-based genetic resources consistent with "common heritage" concepts.

    - Even the biotech industry now admits that IPR policy has proven a costly mistake and is an impediment to innovation.
    - IPRs have, in general, been a bust for universities and have done great damage to the free exchange of scientific information and ideas; rates of innovation are suffering as a result.
    - Academic plant breeders – the few that are left – are ready to "go public" and fight for a renewed commitment to the exchange of germplasm and development of public varieties meeting farmer-society needs.

17. Increase funding by $1 billion for USDA competitive research and education grant programs – with one-quarter targeted to the Small Business Innovation Research program.

    - Focus should be on systems-based applied field research and education, and process innovation in small and mid-scale food processing and manufacturing.
    - Too many academics have little or no real contact with farmers, the food industry, and rural communities. As a result, the once-reliable land grant university technology and information delivery mechanism cannot be counted on. Small companies are filling the gap and can produce practical innovations more quickly than universities. Much more significant private sector and

grower association involvement is needed in publicly funded, problem-solving partnerships.

B. Creating Political Demand for Change

About a third of the 17 changes discussed above are already on the table and/or progress is being made toward implementing them. About another third are conceivable, but will require some sort of national awakening or cataclysmic event to create political pressure and overcome entrenched political interests. And the last third will simply happen largely as a function of the other two-thirds.

Implementing this sort of plan will not require a significant increase in federal expenditures nor will the price of food rise. New taxes, fees and penalties, reduced demand for imported foods, and other longer-term cost reductions will over time improve economic performance and help reduce federal budget deficits. Billions in medical expenditures, lost wages, and environmental harm will be saved.

Public funding for federal agencies and programs is not the issue or what is holding back these sorts of changes. The problem is a lack of consensus and clarity on what is wrong with the American food system and what steps are needed to make things "right". Overcoming this problem is getting harder, not easier, because of increasingly successful efforts by entrenched interests to –

- Set the terms of debate and "spin" the messages reaching the public.
- Control the facts accessible to inform the debate.
- Muddle science, create gridlock in regulatory agencies and processes, and confuse the public regarding food safety, diet-health linkages, and farming's impacts on the environment.
- Sidestep the will of the majority in Congress.

Progress will depend on coordinated and systematic changes in federal fiscal, tax, environmental, research, regulatory and commodity policies. Reforms must establish new "rules of the road" for private enterprise. State and local government initiatives, and much stronger regulatory presence and capabilities, will also be needed to –

- Stimulate innovation and create new market channels and better performing markets, and
- Enforce compliance with worker and food safety rules, water quality laws, and resource conservation requirements.

Collectively, policy reforms must change the factors governing the flow of agricultural and food system income streams. Income streams set the values of assets and wage structures. Income streams determine where capital flows, the terms and cost of capital, and drive the ability to carry out research and development. In general, the bigger the income stream, the more political capital and clout in play and at stake.

Those that control and benefit from current income streams shape the food system in their own image, to meet their ongoing needs, and are able to do so by controlling R+D, policy development, and information flows to consumers and the general public. As a practical reality, steps needed to move toward a more sustainable, safe, and humane food system must be financed from current income. There is no alternative if the goal is to change the whole system, as opposed to creating small islands of change.

For this to happen, policy-makers have to muster the political courage to impose new obligations on farmers and corporations that claim a share of the food system's public plus private income stream. Meeting food safety, worker, shareholder, and environmental obligations will require investment and innovation, and failure to do so must trigger fines, taxes, and penalties sufficient to either change behavior or drive an enterprise out of business. Sounds harsh but let's face it, the American food system is not going to change in response to anything less compelling.

Substantial policy reform is always difficult to achieve. It requires a clear vision of the goals driving change and strong public concurrence with those goals. It takes solid analytical linkages between recommended changes and positive outcomes. It takes passionate, determined people to drive the process relentlessly until the deed is done, and then they must stay involved as the policy reform process moves from Congress to federal agencies, to the courts and local communities. In the policy arena, the Fat Lady never sings.

Hopefully our dialogue at this meeting will bring greater clarity to the road ahead and stronger resolve to confront the political realities that stand in the way of "what it will really take."