casse
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Agriculture in a Steady State Economy

Sound Byte

A steady state economy supports diverse, efficient, and resilient agricultural systems that provide secure supplies of food, healthy communities and intact ecosystems.

Overgrown Agricultural Systems

Since the dawn of the industrial revolution, the scale of farms has increased immensely. Artificial fertilizer, tractors, and other inventions, coupled with cheap oil, have simultaneously increased food production and decreased costs. Large-scale food production has lowered prices to the extent that U.S. citizens spend only eleven percent of their income on groceries (compared to roughly a third fifty years ago). Measured on a dollars per calorie basis, big agribusiness appears to be efficient. The problem, however, is that low food prices externalize many costs. The costs of degraded ecosystems, resource shortages, and fractured farm communities are not reflected in these low food prices. For example:

- Confined animal feeding operations supply markets with cheap meat, but the price of the meat does not include costs like environmental harm from toxic lagoons or emergence of drug-resistant microbes from overuse of antibiotics.
- The price of grain from intensively irrigated cropland does not account for the ecological damage caused by water diversions or the loss of future water supplies from depletion of aquifers.
- Costs for shipping food, applying chemical fertilizers, and operating farm machinery do not include direct pollution costs or the costs of climate change associated with production of greenhouse gases.
- Low food prices from outsized farms also do not reflect the transfer of wealth from farm communities that practice good land stewardship to corporations that manage lands based on short-term profitability.

Real efficiency in a system (including an agricultural one) is measured by energy return on energy invested. Smaller, less mechanized farms produce more calories of food per calorie of energy expended to grow the crops.

Sustainability Gurus Make the Link

Eloquent spokespeople for sustainable agriculture, such as Wendell Berry, Vandana Shiva, Wes Jackson, and Bill McKibben have signed the CASSE position on economic growth. They recognize that an economy in continuous pursuit of growth will not support a healthy agricultural landscape.

Bill McKibben has writes, “Smaller farms produce more food per acre, whether you measure in tons, calories, or dollars. They use land, water, and oil much more efficiently; if they have animals, the manure is a gift, not a threat to public health.”

Vandana Shiva describes industrialized agriculture, on the other hand, as “the recipe for eating oil … [it’s] used for chemical fertilizers that go to pollute the soil and water … to displace small farmers with giant tractors and combine harvesters … for the plastic packaging … [and] to transport food farther and farther away from where it is produced.”

Farmers like Wes Jackson and Wendell Berry have been opposing the centralizing and destructive forces in our farming industry for several decades.

Features of Agricultural Systems in a Steady State Economy

Agriculture and economics are thoroughly intertwined. Economists like Francois Quesnay and Adam Smith recognized that agricultural surplus "frees the hands" for the division of labor and provides the origin of money. Just as a growth economy tends to impart industrial characteristics to its agricultural systems, a steady state economy tends to impart sustainable characteristics to its agricultural systems.

A steady state economy is characterized by stable or mildly fluctuating population and per capita consumption. Such an economy requires a fixed quantity of food. There is no need for constantly increasing the amount of food produced, and there is a calming effect on the landscape – not as much land needs to be in crop-production mode. In addition to stable population and consumption, a steady state economy features stable and relatively low throughput of energy and materials, a characteristic that applies to the agricultural sector.

The best way to achieve sustainable throughput in agricultural systems is to decentralize. Inputs, especially fossil fuel inputs, can be reduced by shifting to local systems of production, distribution, and consumption. Large-scale agribusiness contributes a significant percentage of all fossil fuel emissions in the U.S., stemming from energy-intensive methods of planting, fertilizing, harvesting, packaging, and distributing food supplies. With smaller-scale, more sustainable practices, there is less reliance on fuel to run heavy farm equipment for production and irrigation; less application of pesticide, herbicide, and fertilizers; less reliance on long-distance transportation to ship crops to processing plants and supermarkets; and less use and disposal of plastic for packaging.

Benefits of Farming in a Steady State Economy

Increased Food Security and Quality

In a study of 200 small-scale farms around the world, agronomist Jules Pretty found that farmers using sustainable practices had an average increase of 93 percent in output per hectare. In addition, strong relationships between consumers and growers provide greater incentives for quality and safety.

Improved Ecological Health

Farmers and families that double as land stewards understand their immediate environment better than absentee corporate owners. Small-scale farms tend to have greater crop diversification, fewer problems with invasive plant species and harmful insects, increased soil fertility, and more habitat for wild species.

Opportunities for Meaningful Employment

A national agricultural system consisting of local and ecologically sound farming provides numerous job opportunities. Such farming jobs require skillful application of techniques using the mind and the hands.

Vibrant Local Food Economies and Healthier Farm Communities

Community supported agriculture, farmers markets, and other direct farmer-to-consumer interactions are demonstrating the vitality of local food systems. Wealth is reinvested in the local economy, promoting healthier communities. Relationships are fostered between producers and consumers, creating a greater sense of community, and improving quality of life.

Sources

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