The New York Times

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OP-ED CONTRIBUTOR

The Myth of Sustainable Meat

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April 12, 2012

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THE industrial production of animal products is nasty business. From mad cow, E. coli and salmonella to soil erosion, manure runoff and pink slime, factory farming is the epitome of a broken food system.

There have been various responses to these horrors, including some recent attempts to improve the industrial system, like the announcement this week that farmers will have to seek prescriptions for sick animals instead of regularly feeding antibiotics to all stock. My personal reaction has been to avoid animal products completely. But most people upset by factory farming have turned instead to meat, dairy and eggs from nonindustrial sources. Indeed, the last decade has seen an exciting surge in grass-fed, free-range, cage-free and pastured options. These alternatives typically come from small organic farms, which practice more humane methods of production. They appeal to consumers not only because they reject the industrial model, but because they appear to be more in tune with natural processes.

For all the strengths of these alternatives, however, they're ultimately a poor substitute for industrial production. Although these smaller systems appear to be environmentally sustainable, considerable evidence suggests otherwise.

Grass-grazing cows emit considerably more methane than grain-fed cows. Pastured organic chickens have a 20 percent greater impact on global warming. It requires 2 to 20 acres to raise a cow on grass. If we raised all the cows in the United States on grass (all 100 million of them), cattle would require (using the figure of 10 acres per cow) almost half the country's land (and this figure excludes space needed for pastured chicken and pigs). A tract of land just larger than France has been carved out of the Brazilian rain forest and turned over to grazing cattle. Nothing about this is sustainable.

Advocates of small-scale, nonindustrial alternatives say their choice is at least more natural. Again, this is a dubious claim. Many farmers who raise chickens on pasture use industrial breeds that have been bred to do one thing well: fatten quickly in confinement. As a result,

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they can suffer painful leg injuries after several weeks of living a "natural" life pecking around a large pasture. Free-range pigs are routinely affixed with nose rings to prevent them from rooting, which is one of their most basic instincts. In essence, what we see as natural doesn't necessarily conform to what is natural from the animals' perspectives.

The economics of alternative animal systems are similarly problematic. Subsidies notwithstanding, the unfortunate reality of commodifying animals is that confinement pays. If the production of meat and dairy was somehow decentralized into small free-range operations, common economic sense suggests that it wouldn't last. These businesses — no matter how virtuous in intention — would gradually seek a larger market share, cutting corners, increasing stocking density and aiming to fatten animals faster than competitors could. Barring the strictest regulations, it wouldn't take long for production systems to scale back up to where they started.

All this said, committed advocates of alternative systems make one undeniably important point about the practice called "rotational grazing" or "holistic farming": the soil absorbs the nutrients from the animals' manure, allowing grass and other crops to grow without the addition of synthetic fertilizer. As Michael Pollan writes, "It is doubtful you can build a genuinely sustainable agriculture without animals to cycle nutrients." In other words, raising animals is not only sustainable, but required.

But rotational grazing works better in theory than in practice. Consider Joel Salatin, the guru of nutrient cycling, who employs chickens to enrich his cows' grazing lands with nutrients. His plan appears to be impressively eco-correct, until we learn that he feeds his chickens with tens of thousands of pounds a year of imported corn and soy feed. This common practice is an economic necessity. Still, if a farmer isn't growing his own feed, the nutrients going into the soil have been purloined from another, most likely industrial, farm, thereby undermining the benefits of nutrient cycling.

Finally, there is no avoiding the fact that the nutrient cycle is interrupted every time a farmer steps in and slaughters a perfectly healthy manure-generating animal, something that is done before animals live a quarter of their natural lives. When consumers break the nutrient cycle to eat animals, nutrients leave the system of rotationally grazed plots of land (though of course this happens with plant-based systems as well). They land in sewer systems and septic tanks (in the form of human waste) and in landfills and rendering plants (in the form of animal carcasses).

Farmers could avoid this waste by exploiting animals only for their manure, allowing them to live out the entirety of their lives on the farm, all the while doing their own breeding and growing of feed. But they'd better have a trust fund.

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Opponents of industrialized agriculture have been declaring for over a decade that how humans produce animal products is one of the most important environmental questions we face. We need a bolder declaration. After all, it's not how we produce animal products that ultimately matters. It's whether we produce them at all.

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A version of this article appears in print on , Section A, Page 31 of the New York edition with the headline: The Myth of Sustainable Meat