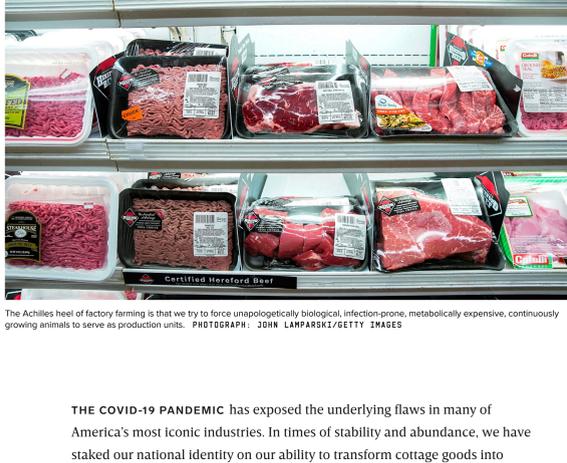




LIZ SPECHT JAN DUTKIEWICZ IDEAS 05.28.2020 09:00 AM

Let's Rebuild the Broken Meat Industry—Without Animals

Covid-19 has laid bare many flaws of industrialized animal agriculture. Plant- and cell-based alternatives offer a more resilient solution.



The Achilles heel of factory farming is that we try to force unapologetically biological, infection-prone, metabolically expensive, continuously growing animals to serve as production units. PHOTOGRAPH: JOHN LAMPARSKI/GETTY IMAGES

THE COVID-19 PANDEMIC has exposed the underlying flaws in many of America's most iconic industries. In times of stability and abundance, we have staked our national identity on our ability to transform cottage goods into global behemoths, democratizing access to all the luxuries money can buy. Lurking just below the surface are fragilities that this pandemic is laying bare. The American invention of industrialized animal agriculture, which now accounts for over 99 percent of the meat sold in this country, is no exception.

A meat shortage is upon us. Retailers and restaurants are already feeling the pinch, and this situation is unlikely to resolve anytime soon. Slaughterhouses have become hotspots for Covid-19 transmission, endangering workers and rural communities and forcing shutdowns that have threatened America's meat supply. Now farmers are being forced to cull millions of animals. In a full page ad in *The New York Times*, the CEO of Tyson Foods warned that the "food supply chain is breaking." In response, the government has rushed in to save the industry, with President Donald Trump enacting the Defense Production Act to keep slaughterhouses running, deeming them critical infrastructure. Meanwhile, the USDA has used the cover of Covid-19 to deregulate meat production—allowing faster line speeds and relaxing food safety inspection rules, thereby increasing risks for workers and the public—and promised a \$19 billion farming bailout.

WIRED OPINION

ABOUT

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All of this is being framed as protecting our food supply chain. The problem, however, isn't the whole supply chain but its weakest link: industrialized animal farming. Is this really an industry we should save? Or should we read the tea leaves of this pivotal moment in history and build a more resilient replacement?

The current system has failed, and building back better should start with a wholesale shift to plant-based alternatives and real meat cultivated from cells. Incumbent companies, startups, and the government should work together to transition to animal-free protein production rather than fighting to maintain an unsustainable and unsafe status quo.

For its various failings, the great strength of the conventional food system is its capacity to distribute food in large quantities and at low cost through a complex and relatively robust value chain. Despite widely shared photos of empty shelves, supermarkets have actually been able to stay remarkably well-stocked. Consumers have had no trouble continuing to purchase bananas freighted from Central America, confections from Europe, and fresh produce from California's Central Valley. While there have been limited cases of onions and potatoes being plowed under for lack of a suitable buyer—as these vegetables are more heavily consumed in restaurants and cafeterias than at home—we haven't yet experienced shortages of plant-based foods. To the contrary, plant-based meat brands are successfully stepping up to meet unprecedented demand.

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Applying an industrialized, economies-of-scale model to animal production is a recipe for disaster. As elucidated by the term "factory farming," industrial animal agriculture involves not just rearing animals in huge numbers but also regarding them as literal "animal machines," to quote the late British writer Ruth Harrison, to produce milk, eggs, and meat. But unlike manmade machines, animal machines can't simply be switched off in times of economic disruption, making them vulnerable to market volatilities.

This is why slaughterhouses are trying desperately to keep running despite being Covid-19 transmission hubs and why dairy farmers are milking cows despite a collapse in the market for milk. Bottlenecks such as slaughterhouse closures have serious ripple effects, threatening product availability and processor profitability while forcing farmers and breeders to cull multiple generations of animals that they can't sell. This problem is compounded by the short shelf life of most animal products and limited cold storage capacity, meaning that even temporary disruptions in either production or demand have an outsized effect on the industry's operations and bottom line. In business terms, this is a demand responsiveness problem.

Producing protein this way also comes with inherent inefficiencies and risks. Generating protein from animal sources requires at least an order of magnitude more inputs than deriving protein directly from plants. We have historically overlooked these inefficiencies because their true costs were never felt by the consumer. Damage to the environment and to public health is a debt we levy on future generations, and the economic unviability of this system has been mitigated by decades of government-enacted price supports, insurance schemes, and subsidies. This in turn has created a culture in which cheap meat is abundant, and access to it has achieved the aura of an inviolable human right.

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Our debts have now come due.

The last thing taxpayers should do is bail out an industry that hurts animals, workers, consumers, the environment, and public health. But we don't need to scrap the whole system and start again. The Achilles heel of factory farming is that we try to force unapologetically biological, infection-prone, metabolically expensive, continuously growing animals to serve as production units. It's an untenable thesis. If we simply remove animals from the equation and replace them with plant-based and cell-based analogs, we can envision a protein production system as abundant and inexpensive as we've become accustomed to, but without the insidious vulnerabilities and externalized costs.

Plant-based products like Impossible Burgers, Just Egg, or Oatly oat milk boast a number of advantages over their animal-derived counterparts. They can be produced far more sustainably with far fewer inputs, as the primary crop ingredients are converted directly into end products rather than wasting energy through animal metabolism. This translates to less cropland, water, fertilizer, and greenhouse gas emissions.

Plant-based products are also much more resilient in times of crisis or volatility. Animal-based products require lead-times of months or years; plant-based products can begin rolling off the manufacturing line within a matter of hours or days. And unlike animals—for whom the production clock starts ticking at the moment of inception—plant-based meat, dairy, and egg analogs are made from shelf-stable ingredients that can safely lay idle in a warehouse for months to ride out fluctuations in production capacity or consumer demand.

Alternatives to animal products entirely obviate one of animal agriculture's most inconvenient truths: the carcass balancing problem. With the near-complete shutdown of the restaurant sector, meat products that are almost exclusively consumed out-of-home—such as chicken wings and high-end steaks—are in oversupply, meaning that farmers will take a hit while cheaper products like processed meats may have to disproportionately raise their costs to compensate.

Crucially, the manufacture of plant-based products doesn't jeopardize the health and safety of workers as the meat industry does. Slaughterhouse workers, already often subject to unacceptable levels of repetitive strain injury and gruesome accidents, have now been disproportionately affected by Covid-19 because of the inherent conditions of their labor: standing shoulder-to-shoulder for prolonged shifts on massive disassembly lines that processors and the president refuse to shut down.

Other alternatives to the status quo should not be overlooked. Agro-ecological and urban farming systems are both good for healthy communities and for short-term resilience in the face of food shocks. In the best circumstances, small-scale farms can often be operated more sustainably than large-scale, industrialized ones. Farmers' markets and community supported agriculture (CSA) offer models of diverse, alternative supply chains. But by their very definition, they're not scalable, broadly accessible, or affordable for mainstream consumers.

The most pragmatic way to start building a resilient food value chain in the wake of the pandemic is to leverage the strengths of the existing system while building alternatives to the most vulnerable and highest-risk elements. There is a very strong economic case to be made that this should start with phasing out animals from the food system. Such a transition will be much easier if the government and incumbent companies lead the change. They now face a critical choice: exacerbate our current problems and risk disruptions from future crises, including other pandemics and climate change, or be a participant in their own disruption.

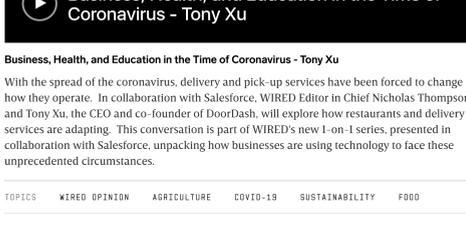
In the wake of Covid-19, major food companies should divest from animals and invest in plant-based and cellular agriculture, including investing in the many startups doing groundbreaking work in food technology. Governments should fund more resilient and sustainable alternative proteins rather than propping up a dying and dangerous industry. Equally importantly, governments should pass legislation that will guarantee that our food system workers, who the current crisis has proven to be both essential and undervalued, are ensured safety and better wages. A more sustainable and resilient food system that's better for animals, workers, and consumers is possible. We need all hands on deck to build it as quickly as possible.

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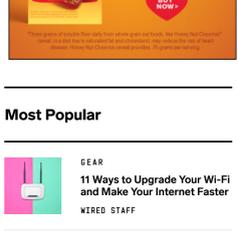
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