

Pandemic leadership failures and public health

Commentary on [Wiebers & Feigin](#) on Covid Crisis

Gidon Eshel

Department of Environmental Science, Bard College

Abstract: In a plainly worded target article whose sagacity and import can hardly be overstated, Wiebers & Feigin place the recent COVID-19 crisis in historic perspective. They warn us that unless we make sweeping changes the next pandemics are all but preordained. They offer a blueprint for dramatically lowering the likelihood of future pandemics.

[Gidon Eshel](#) is a geophysicist and Research Professor at Bard College. His research is on the geophysics of agriculture. [Website](#)



Wiebers & Feigin (2020a,b) (W&F) begin their argument close to their scientific home, enumerating the mounting neuropsychiatric costs of the current COVID-19 pandemic. This fits with our evolving understanding of COVID-19 as a broader systemic inflammation disorder rather than a purely respiratory one (e.g., Mehta et al. 2020), including also cardiological dimensions (e.g., Rath et al. 2020).

W&F then quickly get to the key point that makes their target article so unique and important: A long-term solution for COVID-19 requires fundamentally altering our interactions with livestock, wildlife, and indeed the entire natural world. More limited intervention would be as ineffectual as trying to combat the rise in Type II diabetes without addressing diet or inactivity. W&F document the role of livestock in the rise of antibiotic-resistant infections in humans and in such key recent pandemics as COVID-19, HIV, and avian influenza viruses, including H5N1 and H7N9. F&W conclude with a warning that if we fail to make fundamental changes, more pandemics, and potentially more deadly ones are inevitable.

Rather than a report of new scientific data or a complete, systematic review, W&F's article is a conceptual essay relying on a few key references to bolster their argument. Their thesis is corroborated conceptually and complemented empirically by Gibb et al.'s (2020) detailed *Nature* paper showing that "land use has global and systematic effects on local zoonotic host communities." Among our many needs, real or perceived, the one using the most land by far, powerfully propelling its negative effects, is livestock (Eshel et al. 2014, 2016, 2018, 2019).

To prevent future pandemics, W&F conclude, we must rethink our relationship with animals, and livestock in particular. The main upshot of this rethinking is the need to eat less animal-based food, including markedly reducing our consumption of beef (Shepon et al. 2016). Livestock proponents have a small set of counterarguments to this that they have been invoking since at least the publication of *Diet for a Small Planet* nearly 50 years ago (Lappé 1971):

“Modern intensive livestock operations are becoming steadily more efficient” (e.g., Naranjo et al. 2020). This is true but irrelevant. That producing beef was even more resource-intensive in past decades does not change the fact that today’s beef requires one to two orders of magnitude more resources per unit protein than viable alternative food sources (Eshel et al. 2014).

“Cattle convert sunshine to food using resources that cannot otherwise yield any human food.” It is true that cattle convert grass -- which we or our fellow monogastric animals cannot utilize effectively -- to edible meat. The practical reality, however, is that to be economically viable, even the most grass-based commercial beef production uses large amounts of fossil fuel (Pelletier et al. 2010).

The assumption that natural resources are wisely allocated only if they yield human food fails to take into account alternative uses of resources, such as in maintaining biodiversity (Treves et al. 2019), in sustaining ecosystems (Baker & Winkler 2020) – and in preventing pandemics (W&F). Some particularly productive, minimally biodiverse land is suitable for cattle grazing, but not the roughly 0.7 billion acres of arid U.S. rangeland whose mean productivity is so minute as to afford no more than 17 grazing days per year (Eshel et al. 2015) yet whose biodiversity is greatly reduced by grazing (Filazzola et al. 2020).

“Meat is an indispensable protein source.” This frequent claim is contradicted by a sizeable body of public health data (e.g., Willett 2003; Bittman & Katz 2020; Crimarco et al. 2020).

W&F argue that livestock production is a potent causal factor underlying the COVID-19 crisis -- the pandemic it triggered, and the resultant global health and economic misery. That it promotes pandemics is thus yet another compelling reason to diminish or eliminate meat in American and global diets.

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