**Headline:** How Animal Agriculture Drains Our Freshwater Supplies

**Teaser:** Factory farming has devastating environmental impacts, but there are ways we can protect our vital resources.

By Vicky Bond

**Author Bio:** Vicky Bond is an animal welfare scientist and president of [The Humane League](https://thehumaneleague.org/), a global nonprofit working to end the abuse of animals raised for food.

**Source:** Independent Media Institute

**Credit Line:** This article was produced by [Earth | Food | Life](https://independentmediainstitute.org/earth-food-life/), a project of the Independent Media Institute.

**Tags:** Animal Rights, Food, Environment, Science, Opinion

**[Article Body:]**

Fresh water is critical to the survival of ecosystems and living beings worldwide. However, as much as we all depend on water, some industries are notorious for their unsustainable water usage and rising contribution to water pollution. [Factory farms](https://observatory.wiki/Guide_to_Factory_Farming) are a prime offender.

Groundwater—underground water in sand, soil, and rock—is a vital source of fresh water, comprising [99 percent](https://www.unwater.org/news/un-world-water-development-report-2022-%E2%80%98groundwater-making-invisible-visible%E2%80%99) of such water supply. “Groundwater provides almost half of all drinking water worldwide, around 40 percent of the water used in irrigation and about one-third of the supply required for industry,” [according](https://www.unesco.org/en/articles/groundwater-making-invisible-visible-2022-and-beyond) to UNESCO, which hosted the world’s first [UN-Water](https://www.unesco.org/en/articles/unesco-hosts-first-un-water-summit-groundwater) summit in December 2022.

The importance of groundwater was the main topic of discussion during the summit. Two issues of particular concern were [overexploited aquifers](https://ui.adsabs.harvard.edu/abs/2002HydJ...10..254C/abstract#:~:text=In%20practice%2C%20however%2C%20an%20aquifer,ion%20cost%2C%20or%20ecological%20damage.), which could lead to water shortages, loss of ecosystems, and land subsidence, and [polluted aquifers](https://www.sciencedirect.com/topics/earth-and-planetary-sciences/aquifer-pollution), which would have disastrous consequences for people, animals, and crops.

With such a valuable natural resource quite literally underfoot, what happens above ground can have a significant effect—for better or worse. Factory farms dense with animal life sustain high levels of surface water usage and contribute to water pollution through runoff. Considering that factory farms exploit and pollute groundwater aquifers, their overall environmental effects are devastating.

“The National Water Quality Assessment shows that agricultural runoff is the leading cause of water quality impacts to rivers and streams, the third leading source for lakes, and the second-largest source of impairments to wetlands,” [points out](https://www.epa.gov/nps/nonpoint-source-agriculture/) the United States Environmental Protection Agency.

Factory farming touches [every aspect of our planet](https://thehumaneleague.org/eating-veg/why/for-the-planet), from emitting massive amounts of [greenhouse gases](https://foodprint.org/issues/how-industrial-agriculture-affects-our-air/) into the atmosphere to contaminating the [groundwater, rivers, lakes, and streams](https://foodispower.org/environmental-and-global/pollution-water-air-chemicals/) we rely on for fresh water. [Factory farms](https://thehumaneleague.org/article/factory-farming-animal-cruelty) house animals in crowded and often filthy conditions, subjecting millions of cows, chickens, and pigs to the [worst forms of abuse for the entirety of their short lives](https://commonenemyfilm.com/). Driven by the demand for [cheap eggs, meat, and dairy](https://thehumaneleague.org/article/factory-farm-to-table-the-truth-behind-cheap-meat-eggs-and-dairy), the animal agriculture industry has disastrous consequences for the planet. This must change.

**Assessing Water Risk**

[Agricultural runoff](https://thehumaneleague.org/article/factory-farm-to-table-the-truth-behind-cheap-meat-eggs-and-dairy) from barnyards, feedlots, and cropland carries pollutants like manure, fertilizers, ammonia, pesticides, livestock waste, toxins from farm equipment, soil, and sediment to local water sources. According to a February 2022 [article](https://pirg.org/articles/large-scale-factory-farms-have-become-the-biggest-source-of-water-pollution-in-the-u-s/) by the Public Interest Research Groups, the factory farming industry is one of the [leading causes of water pollution](https://pirg.org/articles/large-scale-factory-farms-have-become-the-biggest-source-of-water-pollution-in-the-u-s/) in the United States. The animal agriculture industry is also a front-runner for [water risk](https://ceowatermandate.org/terminology/), which makes it an environmentally unsustainable practice.

Scientists assess “water risk” by evaluating the possibility of water-related issues like scarcity, flooding, drought, or water stress. A Ceres report called “[Feeding Ourselves Thirsty,](https://feedingourselvesthirsty.ceres.org/key-findings#main-content)” which looked at public disclosures by companies until June 2021, identified four industries with the highest exposure to water risks: agricultural products, beverages, meat, and packaged foods.

“Agricultural products” refer to items made by farming plants or animals. The [International Organization for Economic Co-operation and Development](https://www.oecd.org/en.html) (OECD) states that agricultural production is “[highly dependent on water and increasingly subject to water risks](https://www.oecd.org/en/topics/sub-issues/water-and-agriculture.html).” The OECD also highlights agricultural production as a major source of water pollution.

Why is this a problem? Water is vital in factory farming—from growing crops to feeding livestock to cleaning facilities. It’s also an essential resource for every living being. So, while agricultural organizations must ensure their water use remains in the realm of sustainability, a 2022 report by the [Investigate Midwest](https://investigatemidwest.org/2022/02/23/it-takes-tons-of-water-to-put-meat-on-americans-plates-but-most-meat-companies-dont-ensure-conservation-in-their-supply-chains/) suggests that’s not happening.

“Most large companies have policies to reduce water use and pollution. But some of the largest meat companies in the U.S. lack measures such as water reduction targets, watershed protection plans, and incentives for suppliers to conserve water,” [wrote](https://investigatemidwest.org/2022/02/23/it-takes-tons-of-water-to-put-meat-on-americans-plates-but-most-meat-companies-dont-ensure-conservation-in-their-supply-chains/) Madison McVan of Investigate Midwest, citing the Ceres analysis.

Further, [Ceres reports](https://investigatemidwest.org/2022/02/23/it-takes-tons-of-water-to-put-meat-on-americans-plates-but-most-meat-companies-dont-ensure-conservation-in-their-supply-chains/) that [Pilgrim’s Pride](https://www.pilgrims.com/), one of the largest global poultry producers, set a public goal to decrease its water use intensity (or the amount of water used to produce a pound of chicken) by 10 percent by 2020. Instead, it self-reported that it had increased its water use in its U.S. operations by [5 percent](https://sustainability2020.pilgrims.com/)

From 2019 to 2022, the company said it had increased its water use by [12 percent](https://sustainability.pilgrims.com/). To complicate matters, in February 2024, New York’s Attorney General Letitia James [filed a lawsuit](https://apnews.com/article/jbs-lawsuit-climate-meat-new-york-attorney-general-f39c7f030fa318af38120257aa3680e5) against JBS (which owns Pilgrim’s Pride, among other meat companies), accusing it of greenwashing its product and misleading consumers about its impact on the environment.

**Water Scarcity**

It is increasingly critical for the agricultural industry to join water conservation efforts. As the [World Wildlife Fund](https://www.worldwildlife.org/threats/water-scarcity) (WWF) indicates, water scarcity remains a pressing global concern. Just [3 percent](https://www.worldwildlife.org/threats/water-scarcity) of our planet’s water is fresh, including water frozen in glaciers (which accounts for about [2 percent](https://www.usgs.gov/faqs/how-much-earths-water-stored-glaciers)). Because fresh water is a limited natural resource, the animal agriculture industry’s high water use is a growing concern.

In 2024, animal agriculture accounted for almost [a third](https://www.fairr.org/tools/protein-producer-index/esg-factors/water-use) of freshwater use globally. The Meat Atlas 2021 states that animal feed from arable crops requires about [43 times](https://eu.boell.org/en/2021/09/07/water-thirsty-animals-thirsty-crops) more water to produce than feed like grass or roughage that animals could access if they were allowed to graze. In 2014, more than [67 percent](https://www.vox.com/2014/8/21/6053187/cropland-map-food-fuel-animal-feed) of crops in the U.S. went to animal feed. In 2020, WWF estimated that almost [80 percent](https://wwf.panda.org/discover/our_focus/food_practice/sustainable_production/soy/) of the world’s soybean crops were used in animal feed. In the same year, in the U.S., [38.7 percent](https://www.weforum.org/agenda/2021/06/corn-industries-sustainability-food-prices/) of corn was used to feed animals.

A 2020 study by the [Animal Legal Defense Fund](https://aldf.org/article/california-slaughterhouse-illegally-uses-vast-quantities-of-water-to-cruelly-kill-chickens/) shows that just one slaughterhouse in Livingston, California, used approximately [4 million gallons](https://aldf.org/case/challenging-foster-farms-slaughterhouses-illegal-water-use/) of water daily in the [live-shackle slaughter](https://actnow.thehumaneleague.org/live-shackle-slaughter/) of chickens—accounting for about [60 percent](https://aldf.org/article/california-slaughterhouse-illegally-uses-vast-quantities-of-water-to-cruelly-kill-chickens/) of the city’s water usage. That’s equivalent to using about 2 billion gallons of water annually.

Moreover, in January 2022, the New Roots Institute stated, “Every day, 2 billion gallons of water are withdrawn from freshwater resources for the farming of land animals in the U.S.”

The slaughterhouse used some water in electrified [stun baths](https://aldf.org/case/challenging-foster-farms-slaughterhouses-illegal-water-use/) and some in [scalding tanks](https://www.animalaid.org.uk/slaughterhouse-failings-result-live-chickens-plunged-scalding-water/) to de-feather chickens. Because this inhumane approach to slaughter is so terrifying for chickens, slaughterhouses also use vast amounts of water to clean [feces and vomit](https://aldf.org/article/california-slaughterhouse-illegally-uses-vast-quantities-of-water-to-cruelly-kill-chickens/) from the chickens’ bodies after [live-shackle slaughter](https://actnow.thehumaneleague.org/live-shackle-slaughter/).

**Water Use Is One of Many Harms Caused by Factory Farming**

The tremendous amount of water needed to grow crops for feed, clean facilities, raise animals, and slaughter them puts immense pressure on Earth’s limited freshwater resources. Evidence suggests most meatpacking organizations [don’t ensure sustainable water practices](https://investigatemidwest.org/2022/02/23/it-takes-tons-of-water-to-put-meat-on-americans-plates-but-most-meat-companies-dont-ensure-conservation-in-their-supply-chains/) in their supply chains. This does not bode well for the planet’s [long-term impact](https://thehumaneleague.org/environment) on humans, animals, and ecosystems.

Factory farming not only causes endless and unnecessary animal suffering but also uses an excessive amount of environmental resources, pollutes the planet, and consumes vast amounts of freshwater supplies. But animal agriculture impacts much more than freshwater: Meat-based diets harm the [environment](https://woods.stanford.edu/news/meats-environmental-impact), [nonhuman animals](https://thehumaneleague.org/article/factory-farming-animal-cruelty), and [human health](https://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/meatless-meals/art-20048193).

We must work together as concerned citizens, [consumers](https://www.farmforward.com/news/us-consumers-would-be-concerned-upon-learning-where-meat-really-comes-from/), and [voters](https://publichealth.jhu.edu/2019/survey-majority-of-voters-surveyed-support-greater-oversight-of-industrial-animal-farms) to end factory farming and repair our broken, cruel, damaging, and [unsustainable food system](https://thehumaneleague.org/broken-food-system). [Activists worldwide](https://thehumaneleague.org/article/famous-animal-activists) are advocating for change, and plant-based diets are [steadily increasing](https://www.strategicmarketresearch.com/blogs/plant-based-food-statistics). According to the Plant Based Foods Association, the number of U.S. citizens choosing plant-based diets increased to 70 percent in 2023 from 66 percent in 2022. Moving to a world without animal suffering or environmental degradation is possible. But it requires all of us to change how we eat and live to make it happen.