

Lawns are everywhere: athletic fields, golf courses, recreation areas, suburban parks, cemeteries, town squares—and home landscapes, too. These are where Americans frequently go to enjoy “nature.” Yet we may reflect on this popular assumption (this month’s Sacred Bovine). Whence this image that lawns are *natural*?

The conventional aesthetic of lawns may seem paradoxical. We know that they are artificial habitats. They require perpetual upkeep. They are mowed. They are watered. They are fertilized. They are treated with herbicides and pesticides. They may be reseeded or overseeded. All that intensive management is needed to maintain their apparently “natural” status? Still, cultivated turf continues to impress many as idealized nature.

Ironically, the most common lawn grass species in America are not native (Beard, 1998; Triuni, 2022). Kentucky bluegrass (*Poa pratensis*), the most popular, originated not in Kentucky, but in central Europe. As did fine fescue and tall fescue (*Festuca* spp.) and creeping bentgrass (*Agrostis stolonifera*). Perennial ryegrass (*Lolium perenne*) comes from southern Europe and western Asia. Warm season grasses evolved in the tropics: Bahia grass (*Paspalum*) in South America (including Bahía, of course); Bermuda grass (*Cynodon*) in eastern Africa (not Bermuda); and zoysiagrass (*Z. japonica*) and centipedegrass (*Eremochloa ophiuroides*) in southern China. Only buffalograss comes from America—from the Great Plains, where indeed the buffalo once roamed. Ecologically, most turf is composed of *introduced species*, not growing “naturally” in their native habitats.

Renowned sociobiologist E. O. Wilson once professed that lawns are emblems of biophilia. They embody, he claimed, genetically encoded memories of our evolutionary origins in the African savannas (see Sacred Bovines, April 2018). But that was based more on speculation than rigorous evidence.

The cultural allure of lawns can be traced historically. Lawns emerged primarily from wealth and the luxury of untilled land. They visually broadcast an image of affluence: the gardens at the royal palace in Versailles or the pastoral estates of the landed gentry in Britain (Jenkins, 1994). After World War II, William Levitt, a home builder, helped establish lawns as a democratized standard, universally shared, for suburban communities (Steinberg, 2006).

All this was amplified by messaging from the lawn care and pesticides industries. The triumph of World War II provided inspiration. One 1955 magazine advised its readers:

It's time to take up arms against the weeds. From now on, when man and nature meet on the lawn, it's dog eat dog. ... Your best bet is not these infantry tactics but wholesale slaughter by chemical warfare, utilizing the impressive arsenal of chemicals now available to every lawn owner beset by weeds. (Jenkins, 1994, pp. 146–147)

Infantry tactics, arms, warfare, arsenal, slaughter? In the postwar era, the image was to conquer and control nature, not to allow

nature to follow its own course. Nonetheless, the ideology took hold. In 1961, noted landscape architect James Rose described the persistent ideal of the American lawn: “forever with us from Florida to Oregon—a sacred cow, which we feel compelled to have and hold at any sacrifice” (Rose, 1961, p. 25). Indeed, carefully tended, dark-green lawns have become a revered cultural value—enforced, in some cases, by city ordinances or homeowner association rules (e.g., Pollan, 1989; Steinberg, 2006, pp. 179–200).

Nowadays, one finds a different kind of promotional messaging. Over the decades, values have shifted, honoring harmony with the environment. Accordingly, the turf industry now depicts lawns as ecofriendly. They tout statistics on their environmental benefits (e.g., Lawn Institute, 2023; Figure 1). The overall intent, it seems, is to portray lawns as healthy ecosystems—photosynthesizing, hosting diverse soil fauna, and so forth. Namely, the culturally derived value of lawns is now rendered as an unmediated expression of nature itself. Lawns seem to justify themselves, quite apart from human thinking. That is, the concept of lawns has been *naturalized*. More importantly here, perhaps, science has been enlisted (inappropriately) to inscribe that ideology into nature: another case of the *naturalizing error* (Allchin & Werth, 2017; see also Sacred Bovines, February 2007, February 2008, April 2014).

Unfortunately, lawns are not very “green” environmentally (last month’s Sacred Bovine). They generate more greenhouse gases than they store. They use water resources. Excess chemicals leach into local waterways. Maintenance equipment generates air and noise pollution.



Figure 1. How the Lawn Institute naturalizes the concept of lawns, by appealing to the environmental benefits of lawns. (Courtesy of the Lawn Institute)

The image from lawn advocates that tended turf echoes nature can be grossly misleading. Their appeals to science are thus a prime occasion for instruction on misinformation.

First, promoters of turf present cherry-picked data. For example, the industry-funded Lawn Institute (2023) cites measurements of how much carbon a lawn can absorb. The impression is that lawns thus help mitigate climate change. However, they implicitly compare the effects of lawns to bare soil or concrete pavement—as though absence of vegetation was the only alternative or the appropriate “null hypothesis” or experimental control. It is as though the replacement of original prairie or forest never occurred. Or they cite statistics about the production of oxygen (Figure 2), without taking into account the use of oxygen in coincidental respiration processes, from the decomposition of lawn clippings and rotting thatch. Similarly, data for carbon uptake do not include related carbon emissions. The “evidence” is selective. But only an expert can recognize that. Still, one can dissect here just how incomplete data can be grossly misleading. How can the very absence of relevant information be artfully hidden?

In other cases, deception arises in how the research question is framed. Many studies—even if they exhibit standard scientific methods—avoid addressing variables that will interfere with the “story” one is trying to promote. For many years, studies on lawns and greenhouse gases focused narrowly on carbon dioxide only, disregarding the relevant soil bacteria (well known to ecologists) and their production of nitrous oxide, another potent greenhouse gas (Gu et al., 2015). The “data” were genuine, but the problem frame was skewed to exclude certain relevant evidence.

A prudent approach to assessing the reliability of public scientific claims is thus *not* to immediately evaluate the arguments or the evidence. Discerning errors usually requires specialized expertise.

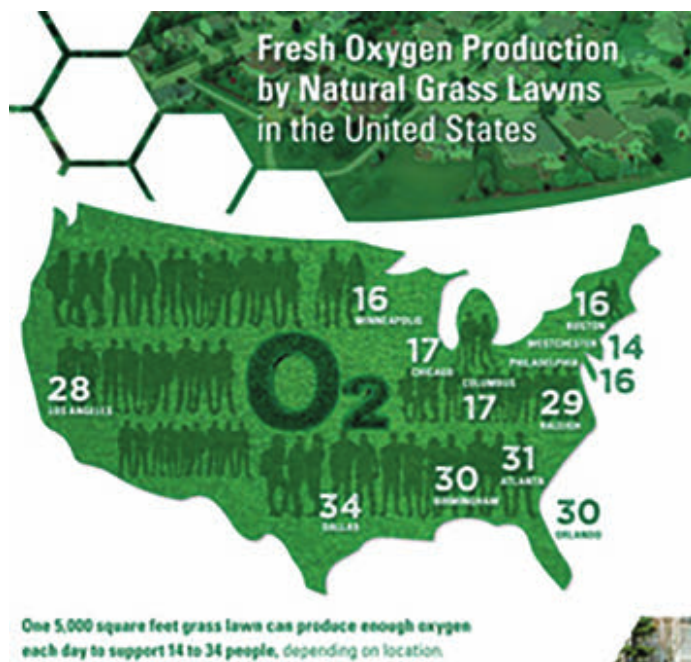


Figure 2. Industry claims about the production of oxygen by lawns, excluding data about the corresponding use of oxygen (which results in no or minimal net benefit). (Courtesy of the Lawn Institute)

Rather, the first step is to check the source. What is their purpose? Are they biased? Do they have the institutional credentials and a track record of credibility? Do they fairly reflect the consensus of the relevant experts? Researchers on turf science rarely fully report their sources of funding. That disclosure might reveal conflicts of interest—a telltale dimension in gauging trustworthiness (Stein & Davis, 2014). In short, one may easily manipulate raw information or gerrymander the science to promote a particular message. Accordingly, information on lawns—widely available on the internet—can be a good case for students to inquire about disinformation tactics and to develop the analytical skills to sort effectively through media claims about science. Namely, who speaks for science? (See Sacred Bovines, May 2012, November 2012.) One may ask philosophically, “Are traditional lawns natural?” However, a more telling question may be: “Who might want us to believe so, and why?” What alternatives might we envision, beyond the historical model of closely governed turf (e.g., Penick, 2013; Roach, 1993)?

Perhaps our modern culture cannot escape managed landscapes. But we can certainly reflect on how ecology informs how we shape those landscapes to reflect our ultimate values. Mindful of climate change, we might increase carbon density with trees, shrubs, and other perennials. Aware of species interactions, we might consider supporting pollinators and other wildlife, such as birds and butterflies. Attuned to the local habitat, we might capitalize on native plants that need less artificial tending, less intervention. Cognizant of mineral cycles, we might encourage local conservation and recycling of trimmed foliage. How we manage our local landscape is a microcosm, of sorts, for how we view nature on a global scale. Right in our own backyard.

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