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Updating the Building Code to Include Indoor Farming Operations

Clint Simpson*

Abstract

Urban agricultural production has grown to be a critical tool in the battles for food security and sustainability. A common regulatory barrier to urban agricultural operations big and small has been ambiguity in land-use laws. Local governments are increasingly friendly toward community gardens, small greenhouse farming operations, farmers markets, and the like. Many have sought to lift regulatory restrictions and provide clarity in the law.

However, while these efforts benefit a multitude of local food production efforts, they do little to address the regulatory ambiguities faced by commercial-scale, indoor farming operations, especially vertical farms. Particularly concerning to indoor vertical farms are the ambiguities implicit in the International Building Code (“IBC”), which serves as the model building code for virtually every American municipality. Currently, the IBC lacks any provisions contemplating buildings purposed for large-scale indoor crop production. While some state governments have traditionally exempted agricultural buildings from this type of regulation, this is neither a safe nor feasible solution for indoor farming operations. This article seeks to provide alternative solutions. First, in the short term, local governments should provide clear statutory guidance concerning where indoor farming operations fit into the IBC scheme. Second, as a more sustainable solution, the International Code Council, should update the IBC to account for commercial-scale indoor farming operations by including such operations under a particular occupancy group.

I. Introduction

In recent years, there has been a drastic resurgence of urban agricultural practices.¹ As people begin to prioritize self-sufficiency,
prefer locally sourced foods, and decrease their carbon footprints, urban agriculture stands as an attractive alternative to traditional models of food production. Urban agricultural practices include raising livestock inside the city, small personal urban gardens, garden clubs, community-supported agriculture ventures, farmers markets, and larger commercial enterprises.\(^2\) Commercial vertical farming operations have grown alongside community-based farms and gardens,\(^3\) providing large-scale crop production with environmental advantages over traditional commercial crop production.\(^4\) While indoor vertical farms are growing, the largest challenge they face is in raising the capital necessary to get off the ground.\(^5\) Local governments can facilitate these fundraising efforts by making regulations more friendly to indoor vertical farming operations.

Luckily, urban planning models that integrate local food production systems into the fabric of land use have grown in popularity, displacing the more restrictive traditional zoning systems.\(^6\) The broader trend of integrating agriculture into cities is known as “Urban Agrarianism.”\(^7\) Many city and county governments have updated zoning ordinances and other regulatory measures aimed at protecting small-scale urban agricultural practices.\(^8\) These measures focus more on expanding zoning permissions, offering tax incentives, and exempting certain structures from building codes.\(^9\) While helpful to community gardens and small, traditional farms, these policies shed very little light on how building codes will affect indoor vertical farms. Consequently, such policies leave large-scale, commercial urban farms out of the picture.

This article highlights the need to fill the existing gaps in pro-urban agriculture policy schemes. Specifically, it offers two courses of action—one intended to alleviate the problem in the short-term, and the other intended as a more permanent fix. First, local governments need to provide clarification as to which occupancy group governs indoor vertical farms. Publishing opinion letters that

\(\text{(Am. Bar Assc. ed., 2015) (discussing the history and development of the current American urban agricultural trend).}\)

\(^2\) See id. at 4.

\(^3\) See AGRILYST, STATE OF INDOOR FARMING 7 (2017).

\(^4\) See generally Kheir Al-Kodmany, The Vertical Farm: A Review of Developments and Implications for the Vertical City, 8 BUILDINGS 24 (2018) (providing an overview of the benefits of vertical farming and the state of the industry).

\(^5\) AGRILYST, supra note 3, at 36.

\(^6\) Roberts & Pollans, supra note 1, at 12.

\(^7\) Id.

\(^8\) E.g., id. at 11–12.

\(^9\) See infra Part V.
are directly on point is the easiest way to do this. Second, the long-
term solution is to update building codes—specifically, the
International Building Code (“IBC”)—alongside zoning ordinances,
either by adding a new “occupancy group,” or adding statutory
clarity to the existing occupancy groups.

The background section of this article begins with a baseline
description of indoor vertical farming and explains why state and
local governments should seek to encourage the growth of
commercial indoor vertical farming operations alongside small-scale
urban agriculture. The next section then outlines current zoning and
building code barriers to urban agriculture, how local land-use
regulations have evolved to address these barriers, and why these
measures fail to address the current problems with building codes.
The next section then discusses the current deficiencies in the
International Building Code itself. Finally, the discussion section of
this article addresses why statutory clarification and modification of
the International Building Code is the next logical step in
encouraging indoor vertical farming.

II. Background

A. What is Indoor Vertical Farming?

To understand indoor urban farming, one must first be
familiar with urban agriculture generally. A fitting and popular
definition for urban agriculture is “the growing of plants and the
raising of animals within and around cities.” As noted in the
Introduction, this can include a variety of crop production formats—
from backyard and rooftop gardens to neighborhood gardens on
combined lots.

From a very general standpoint, we can consider “indoor
urban farming” to be the raising of plants in enclosed structures in an
urban setting. Indoor farming facilities may be constructed
purposefully from the ground up or converted from existing
buildings. “Vertical farming” falls under the larger umbrella of
indoor urban farming for the purposes of this article. In basic
terms, vertical farming is the farming of crops distributed vertically
rather than horizontally, as is done in traditional row-cropping.

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11 Roberts & Pollans, supra note 1, at 4.
12 The “vertical farm” can be traced back as far as 600 A.D. to the Hanging Gardens
of Babylon, but the modern concept of vertical farming refers primarily to indoor
farming practices. See Al-Kodmany, supra note 4, at 32.
13 Id.
While outdoor vertical farming is a relevant practice, it is of less consequence for the purpose of this article. Accordingly, as used in this article, “vertical farming” refers exclusively to vertical farming methods that require permanent building structures.14

There are essentially three types of vertical farms: (1) small structures located on the rooftops of residential and commercial buildings; (2) farms constructed from tall buildings with several layers of growing beds (“modest-sized vertical farms”); and (3) what Kheir Al-Kodmany refers to as “visionary” multi-story buildings (“visionary vertical farms”).15 This article concerns the latter two.16

One common method of building modest-sized vertical farms involves the conversion of abandoned factories or other industrial buildings, as this method can drastically cut start-up costs by eliminating the need to construct a new building.17 “The Plant” is one such farm. The Plant is an indoor vertical aquaponic farming operation located in Chicago, Illinois, run by the non-profit organization, Plant Chicago.18 The Plant utilizes the “aquaponic” method—a combination of aquaculture and hydroponic food production—whereby a closed hydroponic system is created using a symbiotic relationship between the production of fish and crops.19 The fish are grown for food production and their waste products are then used to provide the necessary nutrients for hydroponic crop production; the only required resource input is fish food.20 Like many other indoor vertical farms, The Plant utilizes an alternative energy source—in this case, an anaerobic digester—for some of its energy needs.21 Moving forward, The Plant will act as an excellent

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14 It is important to focus on permanent structures here because the vertical farming operations discussed require sturdy, permanent buildings. Additionally, temporary agricultural buildings such as hoop houses are regulated much more loosely by the bulk of statutory land-use schemes. E.g., infra Section V.D.
15 See Al-Kodmany, supra note 4, at 2.
16 Rooftop vertical farms are typically small in scale and of such a construction that they will reap the same regulatory benefits as traditional community gardens. Nicole M. Reese, An Assessment of the Potential for Urban Rooftop Agriculture in West Oakland, California (May 16, 2014) (unpublished Master’s Projects and Capstones) (on file with the Gleeson Library, University of San Francisco).
18 Who We Are, PLANT CHICAGO, http://plantchicago.org/who-we-are (last visited Mar. 29, 2019).
19 Id., supra note 17, at 16.
20 Id.
21 Id.
example of how vertical farming operations may run afoul of local regulations.\textsuperscript{22}

\textbf{B. The Benefits of Indoor Vertical Farming}

The last century saw a major shift in agricultural production, away from small-scale, family-owned farming operations and towards massive commercial farming operations.\textsuperscript{23} While this change in the industry allowed for significant gains in food production, modern row-crop farming methods have had a disastrous impact on the environment.\textsuperscript{24} Tilling practices designed to plow under the previous crop to prepare for the next crop increase soil erosion.\textsuperscript{25} No-tilling practices are not much better; while they limit soil erosion, they also require a much greater application of herbicide to kill the undesirable weeds that are normally prevented by tilling.\textsuperscript{26} Indoor farming methods provide distinct advantages over traditional farming in these areas.\textsuperscript{27}

One major benefit of indoor farming over traditional land-based agriculture is the reduced use of resources such as water. Indoor farms can reduce water use by up to 90\% when compared to traditional agricultural methods.\textsuperscript{28} Finally, indoor vertical farming completely eliminates the use of tractors for plowing, planting seeds, weeding, applying fertilizer, and harvesting, which collectively account for more than 20\% of all gasoline and diesel fuel used in the United States.\textsuperscript{29}

Another major benefit of indoor farming is increased yield resulting from several factors. First, indoor farming allows for year-round food production and is resistant to the effects of climate change.\textsuperscript{30} While traditional farming is dependent on favorable weather, indoor farming systems are climate-controlled with great

\begin{itemize}
  \item \textsuperscript{22} See infra Section III.B.
  \item \textsuperscript{24} Id.
  \item \textsuperscript{25} Id.
  \item \textsuperscript{26} Id.
  \item \textsuperscript{27} Al-Kodmany, \textit{ supra} note 4, at 6 (“Designed to grow in a controlled, closed-loop environment, these farms would eliminate the need for harmful herbicides and pesticides, maximizing nutrition, and food value in the process.”).
  \item \textsuperscript{28} See Al-Kodmany, \textit{ supra} note 4, at 15, 19 (describing existing vertical farms in Memphis, Tennessee and Den Bosch, Holland).
  \item \textsuperscript{29} See Al-Kodmany, \textit{ supra} note 4, at 4 (discussing fossil fuel use under a traditional farming system).
  \item \textsuperscript{30} Id. at 26.
\end{itemize}
Second, popular methods for indoor crop production are inherently more efficient; vertical hydroponic and aquaponic growing systems allow plants to take in nutrients at a much higher rate and produce faster growth. A recent study found that a thirty-story vertical farm could produce 480 acres-worth of crop yield per acre of base area. This is not shocking when one considers that a single-story hydroponic greenhouse can produce 8.71 pounds per square foot of leafy greens compared to 0.69 pounds per square foot when using conventional methods.

Finally, there are the secondary social and economic benefits derived from the production efficiencies described above. Growing food indoors in urban areas supplies food during times when outdoor crop production is interrupted. Additionally, indoor vertical farming provides a method of crop production that can provide agricultural autonomy to areas with unfriendly climates. Geographical regions that are hostile to traditional agriculture are often very friendly to alternative energy production, like wind, solar-photovoltaics, and solar-thermovoltaics. This provides regions with an opportunity to establish sustainable crop production through the construction of alternative energy sources alongside indoor farming operations.

III. Modern History of Land Use and Agriculture in the U.S.

While the umbrella of land use controls stretches beyond zoning ordinances and building codes, these account for the bulk regulatory challenges faced by vertical farmers discussed in this article. This is because both zoning ordinances and building codes prohibit certain uses and structures depending on the situation. To understand where we are now and one reason why the IBC is in such

31 Id. at 28.
32 Id. at 7; see also Wilson Lennard & Simon Goddek, Aquaponics: The Basics, in AQUAPONICS FOOD PRODUCTION SYSTEMS: COMBINED AQUACULTURE AND HYDROPONIC PRODUCTION TECHNOLOGIES FOR THE FUTURE 113, 138–39 (Simon Goddek et al. eds., 2019).
33 See Al-Kodmany, supra note 4, at 4.
34 AGRILYST, supra note 3, at 14.
35 See generally Chirantan Banerjee, Up, Up and Away! The Economics of Vertical Farming, 2 J. AGRIC. STUDIES 40, 51 (2014) (discussing the social and economic opportunities associated with vertical farming).
36 See Al-Kodmany, supra note 4, at 28 (discussing the potential for indoor farming to provide a source of food during times of reduced yield and drought).
37 Banerjee, supra note 35, at 51.
38 Id.
39 Id.
40 See discussion infra Section III.A; see discussion infra Section III.B.
desperate need of update and clarification, one must first understand how land use controls came to exist in their present form. Use-based zoning and building restrictions that are ambiguous in definition and scope—at least as it relates to agricultural purposes—create headaches best soothed with express statutory solutions. This section outlines the basics of use-based zoning restrictions and modern building codes. Specifically, it shows how ambiguities in the current law make it difficult or impossible to know how vertical farms will be treated from one urban area to the next.

A. Euclidian Zoning Ordinances

Local government ordinances are the primary source of law for zoning regulations.41 Zoning laws are premised on state and local government police power.42 Local zoning regulation in the United States dates to the colonies, where land use controls were often a mayoral power.43 These controls frequently allowed for urban agriculture by their nature.44 In the early twentieth century, new zoning practices started to take over.45 The effect of this was that American cities relegated agricultural production out of urban areas.46 With the advent of railroads and refrigeration, perishable food did not have to originate as close by to be fresh for consumers.47 However, over the last decade, urban agriculture has seen an explosion in popularity, brought on by shifts in consumer priorities toward increased personal wellness and environmental sustainability.48

Much of the zoning power of American city governments comes from iterations of the Standard Zoning Enabling Act, a model law created by the U.S. Department of Commerce in 1924.49 The power of local government to enact such measures was established

43 JULIAN CONRAD JURGENSMEYER & THOMAS E. ROBERTS, LAND USE PLANNING AND DEVELOPMENT REGULATION LAW 44 (West Group eds., 2003).
44 During this time, regulations were focused more on compelling development within cities through affirmative use obligations. While agricultural land use regulations existed, they related to fencing property rather than restricting agricultural practices themselves. See id.
45 Id.
46 Roberts & Pollans, supra note 1, at 206.
47 Id. at 207.
48 See id., at 201–02 (tracking a drastic increase in the mention of “urban agriculture” in the popular press and in law reviews and journals beginning in the mid-2000s).
49 U.S. DEP’T OF COMMERCE, A STANDARD STATE ZONING ENABLING ACT § 1 (revised ed. 1926); see also JURGENSMEYER & ROBERTS, supra note 43, at 68.
in the seminal case *Village of Euclid v. Ambler Realty Co.* In *Euclid*, the Supreme Court determined that a city government had the power to create and enforce zoning laws as part of its police power. In other words, cities can establish zoning ordinances to provide for the health, safety, and welfare of citizens. Cities use this police power to safely manage their growth and development and keep undesirable activities and building structures out of certain areas.

The method of zoning that grew out of *Euclid*, “Euclidian Zoning,” still stands as the most common zoning method used today. The Euclidian Zoning model is predicated on the idea that some uses of land are appropriate for certain areas while others are not. Local governments regulate land use by partitioning land into districts based on the desired use. Common district categories include residential, commercial, mixed-use, industrial, and agricultural districts. Within each zone, particular uses may be deemed “approved,” “permitted,” or “as a right” if the governing body intended them to be allowed without interference. Conditional use may be permitted on a particular lot for a purpose that is considered appropriate for the zone type in some, but not all, instances. Conversely, prohibited uses may not be allowed at all.

**B. Building Codes – The IBC**

While building codes share a common purpose with zoning ordinances in that they are intended to promote local health, safety, and welfare, they are distinct from zoning ordinances in that—rather than regulating the purpose of parcels of land—building codes regulate methods and materials and establish other minimum thresholds in the construction, maintenance, remodeling, and

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50 *Vill. of Euclid v. Ambler Realty Co.*, 272 U.S. 365, 389-90 (1926); *see also* JUERGENSMEYER & ROBERTS, supra note 43, at 44–45.
51 *Vill. of Euclid*, 272 U.S. at 387.
52 JUERGENSMEYER & ROBERTS, supra note 43, at 47.
53 *Id.* at 68–69.
54 *Id.*
55 LeJava & Goonane *supra* note 41, at 226–27.
56 *Id.*
58 *Id.*
59 *Id.*
60 *Id.* at 20.
demolition of buildings. The IBC is frequently used as a model and has been adopted by most cities in the United States.

Like local zoning ordinances, the IBC groups different types of buildings, called “occupancy groups,” based on their intended use. Much of the IBC’s application is predicated on which occupancy group a given building falls under. For instance, the maximum number of stories and allowable height are determined by occupancy group. Occupancy groups include Assembly, Business, Educational, Factory, High-Hazard, Institutional, Mercantile, Residential, Storage, and Utility and Miscellaneous groups.

Without question, use-based regulatory schemes are an effective way to ensure public health, safety, and welfare. There will always be certain spaces, structures, and activities that are incompatible—or even dangerous—with one another. However, use-based restrictions can just as easily function as a barrier to urban agriculture. This is particularly concerning where no forms of urban agriculture are provided for at all or where the limited provisions that do exist are vague in scope and definition. In regard to vertical farming, knowing which occupancy group(s) a vertical farming structure may fit into is of substantial importance because it determines maximum height and number of stories, what zone a vertical farm can operate in, and whether the processing of crops is allowed on site.

IV. Current Barriers: What Stands in the Way?

In the classic use-based restriction tradition, local regulatory barriers are designed with the purpose of either permitting or denying particular uses and structures in particular areas. However, some land use barriers may arise inadvertently—as a consequence of statutory ambiguity, for instance. For this reason, it helps to distinguish express or deliberate barriers to vertical farming from incidental barriers.
Express restrictions can come in many forms, including lot size limitations, setback requirements, and restrictions on the sale of agricultural products. Inadvertent restrictions are more likely to come about through statutory omissions and ambiguities, often resulting from legislators failing to keep up with the times. However, despite the fact that inadvertent barriers are unintentional by nature, they frequently have the effect of exposing certain uses of land to more express restrictions (i.e., failure to adequately define the scope of a particular occupancy group can expose some buildings to regulations that were not intended to apply to it).

A. The Problem of Ambiguity

The most readily-addressable barrier to vertical farming operations is the ambiguity inherent in existing zoning and building requirements. Even cities seeking to expand urban agriculture generally may accidentally create ambiguities or fail to expressly include a given method of farming or raising livestock in such a way that prevents its propagation. This concern is evidenced by the permeation of land use treatises discussing the definition of “agricultural use,” “agricultural building,” and similar terms.

As discussed in the introduction to this article, urban agriculture embodies a vast spectrum of food production, including community gardens, backyard and rooftop gardens, commercial greenhouses, apiaries, backyard livestock, and more. With this variety of use and application available under the “urban agriculture” banner, local governments must take on the task of expressly providing for all those agricultural activities they intend to encourage. The consequence of not carefully including and defining all potentially beneficial urban agricultural practices is that prospective farmers are exposed to legal and financial risk. Additionally, because land use regulations include both zoning

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67 See New Rochelle, N.Y., City Code §§ 89-16, 89–17 (prohibiting the raising of livestock activities on lots less than two acres in size and mandating one acre per animal, even for the raising of chickens).

68 See infra Section IV.C (discussing the consequences of vague definitions in the IBC).

70 See 38 A.L.R. 5th 357 (discussing multiple state court decisions regarding the definitions of “agriculture,” “agricultural building,” “farm building,” and the like); see also Agricultural Exemptions, 4 AM. L. ZONING § 33:4 (5th ed.).
ordinances and building codes, legislators must be careful to provide clarity in both regards.

B. Zoning Ambiguities

The term “Urban Farm” provides an excellent example of ambiguity in legislation. In Seattle, Washington, an “Urban Farm” is defined as a “use in which plants are grown for sale of the plants or their products, and in which the plants or their products are sold at the lot where they are grown, off-site, or both, and in which no other items are sold.”\(^74\) St. Paul, Minnesota defines the very same term as “a commercial growing operation that is generally larger in scale than a community garden.”\(^75\) By contrast, Minneapolis, Minnesota, defines the same term as “[a]n establishment where food or ornamental crops are grown or processed to be sold or donated that includes, but is not limited to, outdoor growing operations, indoor growing operations, vertical farms, aquaponics, aquaculture, hydroponics and rooftop farms.”\(^76\) It is easy to see here how statutory clarity dramatically improves one’s ability to understand how the law will apply to them.

Another example of a zoning ordinance definition that tells a potential vertical farmer very little about their legal risk is found in Denver, Colorado. The City of Denver provides for urban crop production as a non-primary, accessory use, defining “garden” as the “growing and cultivation of fruits, flowers, herbs, vegetables, and/or other plants” which may exist in addition to a residential structure.\(^77\) On its face, this definition might encapsulate a respectable range of personal and commercial levels of crop production. However, it is unlikely that a large indoor farming operation will be welcome in the zoning areas covered by this law, and prospective indoor farmers have only the scope of the term “accessory use” by which to judge their legal risk. While the intent behind such language may be to open as many doors as possible, ambiguity stands in the doorway.

C. IBC Ambiguities

Ambiguous and underdeveloped building codes act as another barrier to vertical farming development. While the business group (“\textbf{Group M}”), factory group (“\textbf{Group F}”), and utility and

\textit{see also} Goldstein et al., \textit{supra} note 74, at 30.
\(^77\) \textit{DENVER, CO CITY CODE} § 11.12.8.2 (2018); § 11.2.6 (2018).
miscellaneous group ("Group U") all have potential relationships with indoor crop production, the IBC does not provide a definition that describes or encapsulates "vertical farming." At best, Group U covers some kinds of agriculture-related structures under the term "agricultural building[s]." An "agricultural building" is defined as:

A structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.

Of great importance is the fact that there is no language pertaining to the production, cultivation, or growing of crops in this definition. Nor does it expressly exclude such uses, prohibiting only habitation, processing, treating, packaging, employment, and public use for agricultural buildings. Consequently, any local government adopting these sections of the IBC without a supplemental definition of "agricultural building" fails to provide statutory clarity regarding buildings that actually operate as farms.

Outside of the Group U provision’s description of agricultural buildings, the only other mention of food production in the IBC is under Group F, which includes buildings used for "assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazardous or Group S storage occupancy," although the list is not exhaustive. The IBC lists “food processing establishments and commercial kitchens not associated with restaurants, cafeterias, and similar dining facilities more than 2,500 square feet in area” under the Moderate-Hazard Factory Industrial Group ("Group F-1"). While filing vertical farms under Group F-1 would foreclose on much of our problem—and make sense given that conversion of factory buildings is such an attractive starting point for vertical

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78 See Tomlinson supra note 17, at 21 (discussing the City of Phoenix’s interpretation of the IBC).
80 Id.
81 Note that “crop production” and “horticulture” are not used interchangeably in most statutory schemes. See id; see also INT’L BLDG. CODE § C101.1 (2018).
82 While the IBC does not define “habitation” specifically, it defines a “habitable space” as “[a] space in a building for living, sleeping, eating or cooking,” and expressly excludes “[b]athrooms, toilet rooms, closets, halls, storage or utility spaces . . .” INT’L BLDG. CODE § 202 (2018).
83 Id. § 306.1.
84 Id. § 306.2.
farms—it is hard to construe this language in such a way so as to capture indoor commercial crop production (absent an express provision).

Other occupancy definitions of the IBC do not lend much more support. For instance, the IBC also includes “incidental uses,” which it defines as “ancillary functions associated with a given occupancy that generally pose a greater level of risk to that occupancy.” However, these uses are restricted to those expressly listed in IBC Table 509, which includes things like furnaces and stationary battery storage, but nothing involving indoor farming or agriculture generally.

The IBC’s treatment of construction materials further complicates the building code scheme. The IBC separates occupancy groups into sub-groups based on their elemental construction materials. IBC height and space requirements are determined based on the occupancy group, the construction type, and the existence of automatic sprinkler systems. While this is all very straightforward on its face, complications can quickly arise in a mixed-use scenario. A single building may be subject to several conflicting height and occupancy restrictions based on the occupancy group and construction materials.

If the mixed-use conundrum were not enough, further complicating issues like the conversion of existing buildings into vertical farms is the fact that the IBC provides that, when a building changes occupancy groups, it must meet the requirements of additional codes, such as the International Energy Conservation Code (“IECC”), at least where adopted. Like the IBC, application of the IECC depends in large part on the occupancy group a structure fits into. This exacerbates the effect of the statutory ambiguity.

V. Analysis

A. Current Solutions: What They Are, and Why They Fail Without the IBC

While restrictive, use-based urban planning models still account for the majority of local ordinances, urban agriculture-
friendly models are coming back into the foreground.\textsuperscript{91} This increase in public interest in urban agriculture has expanded into the legal profession as well, with the mention of “urban agriculture” in law journals increasing dramatically after 2008.\textsuperscript{92} Specifically, there is a shift in agricultural law away from the historical purpose of preserving rural agricultural and toward legalizing and promoting urban agricultural practices.\textsuperscript{93} This urban planning movement—which is designed to implement urban agrarianism—is known as “agricultural urbanism.”\textsuperscript{94} Agricultural urbanism operates as an alternative to use-based urban planning in that it advocates for sustainable urban agriculture as a mandated use, providing that portions of land in a community are to be set aside for food production.\textsuperscript{95} This is analogous to the function of inclusionary zoning for urban housing.\textsuperscript{96}

Much of the current legal discourse pertains to the need for changes at the state and local level.\textsuperscript{97} At these levels, legal efforts geared toward the expansion of urban agriculture include approaches such as changes in municipal zoning codes,\textsuperscript{98} property tax incentives,\textsuperscript{99} and agricultural exemptions from land use laws.\textsuperscript{100} These measures have been successful in breaking down regulatory barriers and fostering community-based urban agriculture systems. But, assuming the ultimate goal is to foster food security and environmental sustainability, such measures must also address commercial-scale vertical crop production. These efforts fall short if building codes are left untouched. Pay careful attention to the measures described below and where they fail to fill the gap left by the outdated IBC.

\textsuperscript{91} Roberts & Pollans, supra note 1, at 9.
\textsuperscript{92} Id. at 5, Table 2.
\textsuperscript{93} See id. at 11 nn. 46–47.
\textsuperscript{94} Id.
\textsuperscript{95} Inclusionary zoning sets aside land for specific types of housing. See JURGENSMEYER & ROBERTS, supra note 43 at 6:7.
\textsuperscript{96} See, e.g., Wooten & Ackerman, supra note 57, at 10–15 (outlining a plethora of legal frameworks promoting urban agriculture generally).
\textsuperscript{98} See also UTAH CODE ANN. § 59-2-1703 (West 2014) (granting tax incentives to urban farming operations that fall within certain lot size specifications and that have been in operation for at least two years prior to application for the applicable tax incentive); see also Roberts & Pollans, supra note 1, at 11–12.
\textsuperscript{99} LeJava & Goonan, supra note 41, at 227; see also Wooten & Ackerman supra note 57, at 14.
B. Zoning Updates

In the midst of use-restriction ambiguities, many cities are making moves in the right direction by updating their zoning provisions to expressly include desired forms of agriculture. Pittsburgh, Pennsylvania, for example, has amended its zoning provisions to permit urban agriculture as a primary or accessory use depending on the zone. It expressly provides for commercial crop production as well. Similar measures have been enacted in Jersey City, New Jersey, and Seattle, Washington. Kansas City, Missouri is another city on the rise. Specifically providing for commercial crop production, Kansas City enacted a zoning exemption for “crop agriculture,” or crop production intended for sale off-site. However, this measure still expressly requires that all agricultural buildings comply with the applicable building code.

These zoning permission updates are friendly to urban agriculture generally and appear to pave the way for vertical farming operations. However, each of these cities still requires that agricultural buildings comply with relevant building codes or contemplate buildings in a way that clearly fails to consider vertical farms. While express zoning permission alleviates concerns around whether a parcel of land is appropriate for vertical farming, it does nothing to address the difficulties of applying the building code to the vertical farm buildings. This illustrates why zoning revisions alone cannot bridge the gap to allowing vertical farming.

C. Tax Incentives

Another area where local governments are trying to foster growth is in property tax exemptions. Tax incentives seek to foster

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102 Id.
104 SEATTLE, WASH., CITY CODE §§ 23.42.051-.052 (2010).
106 Id.
107 See, e.g., JERSEY CITY, N.J. CODE OF ORDINANCES § 345-60(V.1); see also SEATTLE, WASH., CITY CODE § 23.42.051 (restricting “[s]tructures for urban farm use” to a height of twelve feet).
the growth of urban agricultural operations by providing financial incentives to offset start-up costs. This could be very important to prospective vertical farmers worried about how they will pay for labor, materials, property taxes, and building permits. States with tax incentives targeting urban agriculture include Utah, California, Maryland, New Jersey, Minnesota, and Missouri. However, as with many zoning updates, some will fall short of encouraging the growth of vertical farming operations. Some tax incentives may not apply to prospective vertical farmers at all, as the land or structure in question falls outside the requirements for the incentives.

Utah requires that the lot size be at least two but not more than five acres in area and that the lot was used for at least two successive years preceding the tax year. Because the purpose of vertical farming indoors is to limit land use, this is antithetical to vertical farming’s mission. Likewise, a prospective farmer would have to farm the land for two years before applying for the tax exemption and building a vertical farm.

California’s Urban Agriculture Incentive Zones Act (“UAIZ Act”) allows acreage from one-tenth of an acre to a maximum of three acres, but only applies to “vacant, unimproved, or blighted lands [that can be] converted for small-scale agricultural use.” Here again, a potential farmer looking to benefit from this law to develop a vertical farm is out of luck. They are restricted to small-scale production, which eliminates any profitability. This also further exacerbates the challenge of getting capital funding in the first place.

Missouri’s Urban Agriculture Zone Exemption is quite promising. It is likewise limited to blighted areas, but the definition of “blighted” targets existing, run-down lots in urban areas. This law is specifically beneficial to indoor vertical farming operations that seek to convert abandoned factory buildings or similar structures into vertical farm sites. However, like every tax exemption example given thus far, any buildings used or constructed on the property must comply with Missouri’s version of the IBC.

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110 UTAH CODE ANN. § 59-2-1703 (West 2019). Note that the lot size restriction will decrease to a minimum of one acre in 2020.

111 See Roberts & Pollans, supra note 1, at 182.

112 MO. REV. STAT. §§262.900.1–.2 (2014); see also Roberts & Pollans, supra note 1, at 182.
D. Agricultural Building Code Exemptions

Agricultural building exemptions are generally applied at the state level to address concerns like the one this article focuses on. While the IBC does not contain any agricultural exemptions itself, a state government may preempt certain locally adopted portions of the IBC to affect them. Some exemptions pertain to building codes and zoning ordinances alike. Unfortunately, agricultural exemptions to the building code often fail for three reasons. First, they are subject to the same ambiguity problems discussed throughout the article thus far. Second, much like the tax incentives discussed above, building code exemptions often impose conditions that new vertical farming operations will find impracticable if not outright impossible to meet. Third, there is a legitimate concern that exempting large structures from building regulations poses a risk to public welfare—both from a human health and economic perspective.

First, many agricultural exemptions simply will not apply to vertical farm buildings, either expressly or because they suffer from the same ambiguity problems inherent in the IBC occupancy group definitions. Because many exemptions tend to reference the “agricultural building” as defined under Group U, the confusion surrounding what types of buildings are covered remains. This

113 E.g., FLA. STAT. § 163.3162 (2018).
114 FLA. STAT. § 163.3162 (“[A] county may not exercise any of its power to adopt any ordinance, resolution, regulation, rule, or policy to prohibit, restrict, regulate, or otherwise limit an activity of a bona fide farm operation on land classified as agricultural land.”); IOWA CODE § 335.2 (“[N]o ordinance adopted under this chapter applies to land, farm houses, farm barns, farm outbuildings, or other buildings or structures which are primarily adapted, by reason of nature and area, for use for agricultural purposes, while so used.”).
115 MO. REV. STAT. § 65.677(2018) (township zoning “shall not be exercised so as to impose regulations or to require permits with respect to land, used or to be used for the raising of crops, orchards, or forestry or with respect to the erection, maintenance, repair, alteration or extension of farm buildings or farm structures.”)
116 See e.g., CANYON CTY., BLDG. DEP’T, AGRICULTURAL BUILDING EXEMPTION (citing CANYON CTY., IDAHO BLDG. CODE ORDINANCE 04-11 §§ 06-01-07, 09(4)), https://www.canyonco.org/wp-content/uploads/2016/05/Agricultural-Building-Exemption-Rev.pdf.; see also 2006 MItss. AG LEXIS 321, *17 (Opinion No. 2006-00436) (stating that structure must be used for storing farm products or implements or will be used to shelter livestock).
117 E.g., N.H. REV. STAT. ANN. § 674:32-c (“The tilling of soil and the growing and harvesting of crops and horticultural commodities, as a primary or accessory use, shall not be prohibited in any district. Nothing in this subdivision shall exempt new, re-established, or expanded agricultural operations from generally applicable building and site requirements . . .”). Note that because many vertical farming operations convert old factory buildings or similar structures, this limitation fails to reach vertical farming as we have discussed it here.
was recently the subject of an Attorney General’s Opinion letter from Mississippi, which determined that exemptions must be decided on a case-by-case basis.118

Second, agricultural exemptions often come with conditions precedent that preclude new vertical farming operations.119 Requirements include minimum acreage, preexisting ground-crop farming operations, strict zoning qualifications, and the like.120 As one Idaho county’s opinion letter stated, “[i]f you are not farming the ground on which your Agricultural Building (“Barn”) is to be placed; you probably do not qualify for an Agricultural Building Exemption.”121

Third, even when the agricultural building exemptions do apply, it is not clear that they should. There is a genuine concern that larger buildings of greater economic importance should be subject to building code regulations. A white paper from the Minnesota Governor’s Council on Fire Prevention and Control discussed this issue in November of 2010.122 With an apparent sense of urgency, this white paper discussed losses related to snow-load collapse, windstorms, and fire.123 It concluded that non-engineered and partially-engineered structures lack the structural accounting and oversight to provide adequate safety for workers and pose a risk to insurance companies.124 While this is a larger policy issue in and of itself, it calls into question whether agricultural exemptions can be a meaningful part of the solution where vertical farming is involved, especially when considering the types of structures involved in these operations.

118 See 2006 MISS. AG LEXIS 321, *17 (Opinion No. 2006-00436); see also Hinds County Board of Supervisors v. Leggette, 833 So. 2d 586, 592 (Miss. Ct. App. 2002) (discussing factors and guidelines for making a factual determination as to what the definition of an “agricultural operation” is in regard to a zoning exemption).
120 Id. (requiring that buildings be constructed on a single parcel of no less than five acres and in an agricultural district).
121 Id.
122 See MINN. GOVERNOR’S COUNCIL ON FIRE PREVENTION & CONTROL, BUILDING CODE EXEMPTIONS FOR AGRICULTURAL BUILDINGS 4–5 (Nov. 24, 2010) (discussing the risks associated with the exemption from the state building code for agricultural buildings) [hereinafter WHITE PAPER]; see also Kuehl v. Cass Cty., 555 N.W.2d 686, 688–9 (Iowa 1996) (citing IOWA CODE § 335.2 (1995)) (ruling that hog barns sufficient to house 900 feeder hogs are exempt from building codes).
123 WHITE PAPER, supra note 122, at 3.
124 Id. at 5.
VI. Analysis: Solutions

A. Statutory Interpretation: Falling Just Short

One local government has attempted to tackle the issue of vagueness in the IBC with administrative guidance. Phoenix, Arizona, concerned with the IBC’s rigidity on urban agriculture, updated its interpretation of the IBC to account for modern agricultural practices by recognizing that commercial-scale indoor agriculture differs from the accessory buildings allowed under Group U.\(^\text{125}\) To remedy this, Phoenix expressly declared that, under its new interpretation, buildings used as growing areas fall under either Group F or Group U designations.\(^\text{126}\) However, any indoor farm wanting to undertake retail sales also falls under Group M.\(^\text{127}\)

Phoenix accomplished a great thing here by clarifying the application of its building code for many prospective indoor farmers. However, the Phoenix scheme is not perfect. Because Group U, Group F-1, and Group M buildings each carry their own permitting requirements and limitations, any mixed-use building must jump through the same or similar hoops mentioned earlier.\(^\text{128}\) For a farm attempting to grow, wash, and sell produce at the same building site, it is a daunting task to keep up with three separate use group provisions and all that they entail. Additionally, these provisions still lack language for common indoor farming practices like those used in aquaponics, as they contain no language pertaining to the production of livestock.\(^\text{129}\)

Consider the previously described Chicago-based farm, The Plant.\(^\text{130}\) The Plant utilizes a converted factory to grow hydroponic produce and raise fish in a closed system; it also incorporates an anaerobic digester as a source of some of its electrical energy. This complex and varied usage is left unaddressed by the City of Phoenix’s efforts.\(^\text{131}\) In fact, the inclusion of fish in The Plant’s production scheme pushes the farm back into the same unknown territory previously inhabited by “agricultural buildings” under Group U, as the IBC states that livestock must be housed in


\(^{126}\) Id.

\(^{127}\) Id.

\(^{128}\) Id.

\(^{129}\) Id.

\(^{130}\) See supra Section II.A.

\(^{131}\) See City of Phoenix, supra note 125.
“agricultural buildings.” This potentially creates an inherent contradiction in the IBC’s treatment of such a building because, even under the Phoenix interpretation, The Plant is both expressly not an “agricultural building” where it is used for the production of crops and is an “agricultural building” where it is used for the production of livestock.

Critiques aside, the City of Phoenix has provided local lawmakers with the building blocks of a solid short-term solution to ambiguity in the IBC. The concern with statutory clarification is not that it fails as a solution outright; indeed, explicit clarification as to which occupancy group a farm building falls under is a step in the right direction. Rather, the concern with statutory clarification is that it can only go so far in the face of a nuanced, still-developing industry. In other words, efforts like the City of Phoenix’s opinion letter operate as useful, but temporary, salve to the problem of ambiguity until a more permanent solution is available.

B. Updating the IBC

The more sustainable solution is a change to the law. The problems highlighted in this article may be solved with something as simple as the addition of new definitions, or carefully worded interpretations. For building codes, this means a straightforward modification of the IBC occupancy groups. Because virtually every building code in the United States is modeled after the IBC and states re-adopt the revised IBC every few years, changing the IBC directly would mean that local governments are essentially required to do nothing beyond continuing to adopt updated versions of the IBC. The IBC would simply be changed at the top and adopted by the states as usual. This is far more efficient than waiting on each state, county, or municipal government to adopt its own interpretation of the existing occupancy groups to facilitate vertical farming.

The only remaining question is which occupancy group to use. Given the trend in converting old factory buildings to vertical farms—as well as the need for flexibility in height and story limits—the most fitting occupancy group currently is the Group F. If the IBC were modified to incorporate “indoor crop farming” into Group F, particularly Group F-2, the following goals would be accomplished. First, the ambiguities that plague prospective vertical farmers now would be eliminated. Second, it would avoid the massive complexity of mixed-use in regard to all the various permits and hoops that prospective farming operations would have to jump through. Third, the contradictions in IBC use and height restrictions would be

132 INT’L BLDG. CODE § 302.1.
avoided, as indoor farm building would no longer potentially fall under the Group U or Group M categories.

VII. Conclusion

As described above, the popular regulatory measures of updating zoning plans, providing tax incentives, and passing statewide agricultural exemptions, are wholly inadequate for the purpose of fostering vertical farming operations in urban environments. Updated zoning plans tend to benefit community agriculture, but fail to consider large vertical farming operations and leave such operations at the mercy of statutory ambiguities. Tax incentives and statewide exemptions from the building code likewise fail to reach vertical farming buildings, either due to ambiguity or disadvantageous conditions. Additionally, there are seemingly legitimate public policy reasons for not allowing building code exemptions for large, costly structures. Statutory interpretation may alleviate certain problems in the short-term, but still leave some long-term issues with mixed-usage, particularly for farms that want to sell produce on-site. Updating the IBC will alleviate all of these problems and allow local governments to facilitate the growth of vertical farming in the future.
Science and Risk Analysis in CPTPP/SPS-Plus: Role Model or Unbearable Burden?*

Kuei-Jung Ni**

Abstract

Trade in food and agricultural products accounts for a major part of global trade, and the trade continues to alert domestic consumers to the risks associated with modern food processing and production methods. The Trans-Pacific Partnership Agreement (TPP), now rebranded as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), represents a new model of mega-regional trade pacts posed to set higher standards for promoting and streamlining trade liberalization. Because of concerns with national food safety regulations that could constitute forms of non-tariff barriers, the CPTPP, in contrast to the World

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Trade Organization (WTO), stipulates further rules on parties’ sanitary and phytosanitary measures (SPS), achieving a type of role model of SPS-plus.

This article explores the legal implications and progressiveness of the SPS-plus design, particularly focusing on the requirements of scientific evidence and risk analysis. The SPS-plus that sets hurdles for national regulatory regimes largely reflects WTO jurisprudence, international health standards, and the national regulations of the United States. I argue that the role model may provide momentum to modernize parties’ food safety regimes, but the cost of full compliance could be high. Genuine collaboration, experience-sharing, and technological and financial support between developed countries and less developed countries may alleviate the difficulties of implementation and promote coherence.

Key words: CPTPP, SPS-Plus, Food Safety, Science, Risk Analysis

I. Introduction

Food trade accounts for a major part of global trade, and domestic consumers are increasingly wary of the safety of imported foods. Although food trade can ensure food security for countries that cannot sustain themselves, it may also engender risks that originate from modern food processing and production methods. Therefore, national food authorities are expected to manage food risks cautiously. Risk analysis consists of three components, namely risk assessment, risk management, and risk communication, which has become an important mechanism of risk control.

The incorporation of risk analysis in food regulations has succeeded at global and local levels in ensuring food safety. The Codex Alimentarius Commission (CAC), a World Health Organization (WHO) and Food and Agriculture Organization (FAO) subsidiary, is the leading international food safety institution. The CAC not only engages in risk analysis in setting international food standards, but also promotes the implementation of risk analysis within national regimes.\(^1\) The WHO and the FAO have jointly produced a guidance document to help national authorities establish food safety risk analysis regimes.\(^2\) Nonetheless, the document,
although useful in this regard, is implemented on a voluntary basis. The European General Food Law represents a clear model of the full incorporation of risk analysis in governing food safety, and the Food Safety Basic Law of Japan also recognizes the indispensable role of risk analysis in ensuring consumers’ confidence in food safety.

Concerned with the impact of national regulations on imported foods, the World Trade Organization’s (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) requires members to adopt risk-based decision-making and especially to link trade measures to risk assessment. However, the drafters of the SPS Agreement did not intend to oblige members to build a thorough risk analysis system into their regulations, despite certain provisions partially reflecting such ideas. Since the WTO Doha Round was in dilemma, trading parties have turned their efforts to negotiating regional trade agreements (RTAs). To further promote the international flow of agricultural products without unjustified intervention, certain SPS-plus disciplines have been pursued. In contrast to the SPS Agreement, most SPS-plus arrangements have emphasized cooperation and effective coordination between parties. Nonetheless, most of the agreements have shown little interest in pushing for the establishment of an advanced system for risk-based regimes beyond that of the WTO’s original mechanism.

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3 Risk Analysis constitutes one of the general principles of European food law of which definition has clearly been provided. See 2002 O.J. (L 31) 1–8 (defining Risk Analysis as one of the general principles of European food law) [hereinafter European General Food Law].


6 Id. arts. 5.5–5.6.

7 See Part II of this Article and corresponding footnotes.


9 See id.
The finalization of the Trans-Pacific Partnership Agreement (TPP) involved many stages of negotiations and partners. It began with plurilateral talks of the Trans-Pacific Strategic Economic Partnership between Brunei, Chile, New Zealand, and Singapore. Subsequently, more Asia-Pacific countries expressed interest in joining the trade block. In particular, the United States’ (U.S.) determination to lead and set the agenda for the mega-regional trade arrangement made the TPP the most ambitious and unprecedented RTA in both economic strength and standards. The TPP concluded in 2015 represented a new model of mega-free-trade pacts and was posed to set higher standards for promoting and streamlining trade liberalization, and to espouse significant values beyond trade and commerce concerns.

Since the Trump administration withdrew the U.S. from the TPP in early 2017, the remaining 11 parties have endeavored to keep the agreement alive. During the Trans-Pacific Partnership Ministerial Meeting held in Da Nang, Vietnam, on November 11, 2017, the TPP-11 countries in the Pacific region—New Zealand, Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, Peru, Singapore, and Vietnam—reached a consensus that the TPP would be temporarily replaced by the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP).

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13 See Press Release, Ministry of Foreign Affairs of Japan, Notification of Completion of Domestic Procedures for the Trans-Pacific Partnership (TPP) Agreement (Jan. 20, 2017), http://www.mofa.go.jp/press/release/press4e_001443.html (“It also seeks to deepen and broaden economic ties among countries and regions that share fundamental values such as freedom, democracy, basic human rights, and the rule of law, and is hence strategically significant in terms of pursuing further regional stability.”).

The CPTPP was signed in Chile on March 8, 2018. The free trade pact would become effective 60 days after at least six (or 50%) of the signatories notified the Depositary (New Zealand) of the completion of ratification procedures. As of October 30, 2018, six countries (Canada, Australia, Japan, Mexico, New Zealand, and Singapore) have ratified the agreement. Therefore, the CPTPP entered into force on December 30, 2018.

Several original commitments of the TPP, including intellectual property and investment Chapters, have been suspended, but the SPS Chapter remains unchanged. Due to concerns that national food safety regulations could constitute a form of non-tariff barriers (NTBs), the CPTPP, in contrast to the WTO, adds further requirements to parties’ SPS measures, referred to as SPS-plus. In particular, the CPTPP SPS Chapter explicitly requires risk analysis and provides definitions for its components. In contrast to recent SPS-plus developments in other RTAs and free trade agreements (FTAs), the CPTPP’s SPS approach appears unique and ambitious. The effort to push the incorporation of the risk regime into parties’ regulatory regimes is a progressive agenda that presents both opportunities and challenges for national compliance.

This article explores the legal implications of the progressive design of the SPS-plus model and assesses its impact, particularly focusing on the requirements of scientific evidence and a risk analysis regime. The difficulty for national regulatory regimes to fulfill such high SPS standards seems apparent, but the mandate may provide an opportunity to modernize national food safety governance that has thus far been subject to political and non-science-based considerations. Part II introduces the development of SPS-plus in RTAs. Part III of this article analyzes the CPTPP’s approach to applying a risk analysis mechanism,

16 See id.
19 Id. arts. 7.1, 7.9.
describes the discrepancy between the WTO contexts and those of the SPS-plus, and explores the implications of the obligations imposed on the parties. Part IV discusses the challenges facing the parties in implementing the added requirements. Part V concludes that the significance and challenges of applying the SPS-plus standards for improving national food risk regulatory regimes are considerable. All parties to the new model of RTA should work in good faith to make the arrangement beneficial to all stakeholders.

II. Developments of SPS-Plus in RTAs

The impasses of the WTO Doha agenda pushed trading parties to pursue further trade liberalization by negotiating RTAs and FTAs.20 The aims of the free trade zones include, inter alia, tariff reduction, trade facilitation, NTB elimination, regulatory cooperation, and anti-corruption and environmental protection provisions.21 These objectives exceed the original WTO commitments, namely WTO-plus.22

When trade partners have pursued WTO-plus at regional and bilateral levels, the premise of SPS-plus has also been included in the negotiations. 23 During the past decade, many RTAs/FTAs have been concerned with increasing NTBs and non-tariff measures (NTMs).24 Several reasons have made the move increasingly urgent. Public health concerns, particularly for the risks brought by imported agricultural products, have increasingly attracted the attention of national consumers, prompting nations to increase the level of protection concerning health and environmental safety and tighten their regulations.25 Regulation of imported foods has been enhanced by requiring more inspections and sophisticated certifications. These alleged NTBs or NTMs, many of which have not been entirely science-based or rule-based, have alarmed countries, particularly exporting countries.26 Such countries have

22 See Ken Ash and Iza Lejarraga, Can We Have Regionalism and Multilateralism? in TACKLING AGRICULTURE IN THE POST-BALI CONTEXT 75–78 (Ricardo Melédez-Ortiz et al., eds., 2014).
23 Id. at 77.
25 Id. at 85, 115.
26 United Nations Conference on Trade and Dev., NON-TARIFF MEASURES IN
argued that SPS-plus should be constructed to prevent the abuse of such measures or the implementation of disguised protectionist policies.  

In negotiations of SPS-plus arrangements, parties have pursued some common goals, such as the further elaboration of thorough scientific principles and risk analysis to support and justify food regulations, elimination of unnecessary non-science-based measures, and expansion of the width and depth of information sharing, including transparency requirements. In particular, to facilitate food trade, cooperation and consultation mechanisms have been enhanced. The relevant texts of the CPTPP, the Comprehensive Economic and Trade Agreement between the European Union (EU) and Canada (CETA), and the EU-Japan Economic Partner Agreement (EPA) reflect similar approaches with minor distinctions. In general, these developments derived from a gradual consensus-building among WTO members. Scholars have observed that “many SPS-plus measures found in RTAs are already enshrined in the voluntary guidelines of the WTO SPS Committee on how to implement the WTO SPS Agreement.” The mutuality and interdependence of the agreements can help achieve the convergence of regional SPS-plus approaches and multilateral developments. The progress in RTAs thus, as observed, may be expected to promote the multilateralization of such RTA-plus measures.
III. Scientific Principles and Risk Analysis in CPTPP/SPS-Plus

A. Overall Approach of the SPS Chapter of CPTPP

The U.S. was influential in shaping SPS-plus regarding scientific principles and risk analysis during original TPP negotiations. The proposal of the Office of the United States Trade Representatives (USTR) transcended the existing rules under the WTO and prior U.S. bilateral/regional trade deals. For example, the USTR intended to clarify the elements of risk assessment that were considered to be inadequately elaborated in the text of Article 5.1 of the SPS Agreement. The USTR’s proposal was premised on the concern shared by many exporters that some WTO members adopted import restrictions based on flawed or even nonexistent risk assessments, and, consequently, an “adequate” risk assessment must be further defined. Considering its tensions with several countries in the Asia-Pacific region (Japan, Korea, Taiwan, etc.) regarding certain food safety controversies since 2011, the U.S. anticipated crafting the TPP/SPS Chapter as a mega-regional template for future application. The negotiators consolidated the various SPS proposals into a single text at the ninth round in Chicago, including key elements such as a timeline for risk assessment, enhanced process transparency, and a more specific definition of “sound science.”

Subsequently, U.S. agri-food groups started to jointly and publicly make their appeals at the twelfth TPP negotiation round in Dallas. Several recommendations aimed at revamping existing SPS rules were proposed, including an elaborate set of risk assessment and risk management requirements, enhanced transparency (notification and explanation of new measures and a reasonable length of time for public comments on draft measures), and an emphasis on international standards and harmonization. These recommendations played a vital role in the subsequent

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34 Id.
35 Id.
38 Id.
rounds of negotiations.

The risk analysis mechanism has been adopted by several international institutions that govern food safety, such as the CAC\(^{39}\) and the 2001 Biosafety Protocol.\(^{40}\) Some national and supranational regulatory regimes have also applied and practiced this model, including the EU\(^{41}\) and Japan.\(^{42}\)

The WTO SPS Agreement requires compliance with science-based and risk-based principles for adopting national SPS measures.\(^{43}\) However, the agreement only explicitly mentions the idea of risk assessment and does not specify the terms of risk management and risk communication.\(^{44}\) The Panel in *EC–Hormones* explained the essence of Article 5 of the SPS Agreement by covering elements of both risk assessment and risk management.\(^{45}\) The broad approach to align the coverage with the general understanding, however, was rejected by the Appellate Body simply because such a wording of risk management did not explicitly appear in the context.\(^{46}\)

Regulatory cooperation has constituted one of the major goals of current RTA/FTA negotiations.\(^{47}\) Such a mandate is also

\(^{39}\) See Food and Agriculture Organization [FAO] & World Health Organization [WHO], *Codex Alimentarius Comm’n: Report of the Twenty-Sixth Session*, app. IV, Ref. No. ALINORM 03/41 (June 30 – July 7, 2003), http://www.fao.org/docrep/006/y4800e/y4800e0o.htm#bm24 (containing the working principles that guide the work of the Commission and its subsidiary bodies regarding risk analysis).


\(^{41}\) The European General Food Law, *supra* note 3, art. 6.

\(^{42}\) According to Japan Food Safety Basic Act, “a new concept of ‘risk analysis’ was introduced to promote food safety in a more comprehensive manner. See http://www.fsc.go.jp/english/brochure/brochure2010/fsc10_p3.pdf (last visited Oct. 10, 2018).

\(^{43}\) SPS Agreement, *supra* note 5.

\(^{44}\) See id. (discussing only risk assessment, without mention of risk management or risk communication).


\(^{47}\) See Alexia Brunet Marks, *The Right to Regulate (Cooperatively)*, 38 U. P A. J. INT’L L. 1, 64-65 (2016) (illustrating a number of RTA/FTA practices in enhancing regulatory cooperation, particularly on SPS matters); see generally Eugenia Costanza Laurenza & Fabienne Goyeneche, *Regulatory Cooperation in Free Trade*
commonly required in many SPS Chapters of trade agreements. For example, CETA reflects the trend.\textsuperscript{48} The EPA also highlights the significance of cooperation for ease possible health-related regulatory disagreements.\textsuperscript{49} Both agreements, despite being negotiated by parties of developed countries, failed to elaborate a risk regime beyond the original WTO/SPS design in the end. The EPA—irrespective of its ambition to consolidate risk analysis, as evidenced in an early EU assessment report\textsuperscript{50}—has turned out to be a simple repetition of the WTO legacy.\textsuperscript{51}

By contrast, the CPTPP SPS Chapter has unequivocally specified the requirement for risk analysis.\textsuperscript{52} It is the first attempt at incorporating a relatively sound risk-based and science-based mechanism into a regional trade regime.\textsuperscript{53} The unprecedented approach is a clear indication of the original vision of the U.S. in seeking the codification of high standards into SPS-plus. The effort also represents a progressive development in the WTO/SPS arrangement.

The U.S. has withdrawn itself from the TPP, but the approach originally proposed by the U.S. continues to impact on its current RTA negotiations. The North America Free Trade Agreement (NAFTA) between the U.S., Mexico, and Canada has been renegotiated since the Trump administration came into office.\textsuperscript{54} This RTA has been replaced by the newly-concluded United States–Mexico–Canada Agreement (USMCA).\textsuperscript{55} Some

\textsuperscript{48} CETA, supra note 8, arts. 21.1–21.2.
\textsuperscript{49} See Economic Partnership Agreement, supra note 8, art. 6.1.
\textsuperscript{51} See Economic Partnership Agreement, supra note 8, arts. 6.4, 6.6 (reiterating the mandate of the WTO SPS Agreement on risk assessment).
\textsuperscript{52} CPTPP, supra note 18, art. 7.9.
\textsuperscript{53} Because the U.S and other countries have a strong comparative advantage in agricultural production, they consider import restrictions should meet more reasonable and sound scientific tests to avoid NTBs. See notes 33–37 and accompanying text.
\textsuperscript{55} Id.
changes in the new trade deal originated from the TPP *per se*. In terms of the SPS rules, the USMCA maintains a large portion of the TPP ingredients. The provision concerning “science and risk analysis” generally mirrors that of the TPP/SPS with minor modifications.

B. Implications and Progress of Risk Analysis in the CPTPP/SPS Chapter

i. General Idea of Risk Analysis in the CPTPP

The CPTPP’s definition of risk analysis reflects the common usage appearing at international, regional, and national levels. In particular, it increases the requirements for the format of risk analysis and public involvement in the process by requiring that the operation of the system be documented and opportunities for public comment be provided to interested persons or parties. To clarify the application, the SPS Chapter specifies that such requirements apply only to a risk analysis for a sanitary or phytosanitary measure that constitutes a sanitary or phytosanitary regulation for the purposes of Annex B of the SPS Agreement (transparency).

In the pursuit of harmonization, the WTO/SPS Agreement expects members to apply international standards, guidelines, and recommendations and extends certain incentives, but such international standards are not binding on WTO members *per se*.

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57 *Id.*
58 In contrast to the CPTPP, the new agreement replaces risk analysis with risk assessment and risk management, although the title of the provision remains unchanged. The move may indicate the USMCA’s intent to reduce the mandate of risk communication. Agreement between the United States of America, the United Mexican States, and Canada art. 9.6, U.S.-Mex.-Can., Nov. 30, 2018; see also CPTPP, *supra* note 18, art. 7.1.
59 *Id.* art. 7.1.
60 FAO & WHO GUIDE, *supra* note 2, at 7; see also European General Food Law, *supra* note 3, art. 3, paras. 11-13.
61 CPTPP, *supra* note 18, art. 7.9.
62 *Id.* footnote 4 to art. 7.9, ¶ 4(b).
63 Article 3.2 of the SPS Agreement provides that national SPS measures that conform to international standards enjoy the presumption of consistency with the SPS Agreement. SPS Agreement, *supra* note 5, at 2.
64 Observing the Appellate Body’s jurisprudence has led to the conclusion that “[t]he Appellate Body’s interpretation . . . has turned the course of subsequent SPS
The WTO case law has not fully recognized a principle of deference to certain international standards and their setting. In *Hormones II*, the Appellate Body departed from international standard-setting in two main aspects. First, the Appellate Body opined that experts involved in standard-setting may lack independence and not be suitable to provide objective opinions, especially if they were not in agreement with members who sought a higher level of protection than that of an international regime.65 Second, it also rejected the idea that an existing international standard can justify the sufficiency of scientific evidence that may disqualify a provisional measure.66

By contrast, the TPP negotiators managed to bring the SPS Chapter closer to international standard-setting and demonstrated an intent to further the mandate of harmonization by, *inter alia*, including the encouragement of “the development and adoption of international standards, guidelines and recommendations” and the promotion of “their implementation by the Parties” as one of the objectives of the SPS Chapter.67 The text was aimed at making enforceable the relevant international arrangements on risk analysis that are usually voluntary. As the WTO/SPS Committee and other international standard-setting regimes, including the WHO and FAO, have provided useful references for building a risk analysis regime, the CPTPP parties are required to take into account their works in designing their regulations.68 In effect, the CPTPP SPS Chapter bluntly reinforces the relevance of international soft law with the establishment of a national risk analysis regime.

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66 The Appellate Body also denied that an existing international standard can entail and prove sufficiency of scientific evidence in order to disqualify a provisional measure. Appellate Body Report, U.S. – Continued Suspension, *supra* note 65, ¶¶ 695,733.

67 CPTPP, *supra* note 18, art. 7.2, ¶ (f).

68 *Id.* art. 7.9, ¶ 6(a).
ii. Scientific Principles and Risk Assessment

The SPS Chapter does not provide a new definition of risk assessment as the WTO/SPS Agreement has defined the term clearly.\(^{69}\) To justify the results of a risk assessment and gain public confidence, many national practices have adhered to certain core values and principles when completing the assessment. For example, the European General Food Law specifies that “[r]isk assessment shall be based on the available scientific evidence and undertaken in an independent, objective and transparent manner.”\(^{70}\) The Japan Food Safety Basic Law\(^{71}\) details similar requirements.\(^{72}\)

The WTO/SPS Agreement has yet to add further mandates such as those of the EU and Japan. In addition to requiring a science-based approach to risk assessment, it may be desirable for the SPS Chapter to incorporate objectives compatible with higher values such as democracy and fairness. The CPTPP context has not explicitly recognized the principles of independence and transparency. However, as mentioned, the CPTPP parties shall take into account international standards, guidelines, and recommendations in the execution of risk analysis.\(^{73}\) Thus, the WHO and FAO’s guidance that recognizes the characteristics of objectivity and transparency in risk assessment\(^{74}\) may help shape the progress of national risk analysis regimes, although it is of a less obligatory nature.

Article 2.2 of the WTO/SPS Agreement specifies the science-based principle as one of its controlling mandates.\(^{75}\) According to Article 5.1 of the Agreement, WTO members shall base their trade measures on an assessment of risks.\(^{76}\) In the assessment of risks, they are required to take into account “available” scientific evidence.\(^{77}\) In EC—Hormones, the Appellate Body stated that these two provisions should be read together.\(^{78}\) The difference between the WTO/SPS and the

\(^{69}\) SPS Agreement, supra note 5, Annex A, ¶ 4.

\(^{70}\) The European General Food Law, supra note 3, art. 6, ¶ (2) (emphasis added).


\(^{72}\) Id. arts. 13, 32.

\(^{73}\) CPTPP, supra note 18, art. 7.9, ¶ 6 (a) (emphasis added).

\(^{74}\) FAO & WHO GUIDE, supra note 2, at 48, 49.

\(^{75}\) SPS Agreement, supra note 5, art. 2.2.

\(^{76}\) Id. art. 5.1.

\(^{77}\) Id. art. 5.2.

\(^{78}\) Appellate Body Report, EC – Hormones, supra note 46, ¶¶ 177, 180.
CPTPP/SPS context lies in the benchmark that they set for the eligibility of scientific evidence. The main addition of the SPS-plus in this regard is a focus on making the scientific approach more stringent. A careful reading of the SPS Chapter suggests that it adds criteria of what constitutes “sound science” as opposed to “junk science.”

First, regarding the quality of scientific evidence, the SPS Agreement does not classify the type of science that can satisfy the requirement to support a given measure. However, WTO jurisprudence appears to value the significance of scientific robustness. In US/Canada—Continued Suspension, the Appellate Body stated that the standard of review exercised by a Panel on a party’s risk assessment should involve examining “whether that risk assessment is supported by coherent reasoning and respectable scientific evidence and is, in this sense, objectively justifiable.” Thus, such science should be examined by a test of whether it “comes from a respected and qualified source” and meets “the necessary scientific and methodological rigor.” The SPS Chapter adds an element by emphasizing the “objectiveness” of the science to justify an SPS measure in question. The further elaboration and incorporation of the WTO’s judicial rulings on qualified science by the CPTPP tighten the admissibility of science for legitimate use in risk assessment. Indeed, the reinforced threshold of requiring legitimate science squarely fulfills the original objective of the TPP negotiations to pursue high standards.

Second, with respect to the form of the scientific evidence in question, neither the WTO/SPS context nor its case law requires any certain format. The CPTPP Chapter states that such scientific evidence must be documented. This requirement raises the threshold of compliance. Nevertheless, given the lack of a clear definition of documentation, it remains unclear how stringent the element should be. An argument that scientific evidence must be published in journals could be too restrictive, given many studies and surveys have yet to be published.

79 SPS Agreement, supra note 5, art. 5.2.
80 See PEEL, supra note 64, at 190–230 (discussing the WTO’s treatment of scientific principles).
82 Id. ¶ 591.
83 CPTPP, supra note 18, art. 7.9, ¶ 2.
84 Id. art. 7.9, ¶ 4(b).
85 FAO & WHO GUIDE, supra note 2, Box 3.9, at 50 (noting that certain
Third, regarding the scope of scientific evidence, the WTO/SPS Agreement simply provides that members are required to apply scientific evidence that is available to them. Given that countries possess various levels of scientific and technological development, the alleged “availability” of the evidence in question may differ. The negotiators of the CPTPP SPS Chapter would likely not be satisfied with the WTO mandate because this approach may, to some extent, exempt members from using the best science that exists worldwide but may not be available in the country under complaint. The SPS Chapter limits the scope of the science in question. It first states that the availability of science to parties shall be “reasonably” available. The additional requirement of reasonableness may impose burdens on parties to perform more searches and surveys for further evidence if to do so would be reasonable. Moreover, parties are required to take into account data that is “relevant.” Thus, the limitation could further constrain nations’ discretion in data collection.

On the other hand, the CPTPP’s approach is also a manifestation of the incorporation of the WTO case law. In EC—Hormones, the Appellate Body ruled that the methodology for performing scientific risk assessment is not limited to the usual model of quantitative usage, as a qualitative approach would also be acceptable. Thus, the SPS Chapter aligns with the approach by explicitly covering these two methods.

As expected, the justification for formulating a relatively rigid mandate for the quality of science is not without objections or open questions. The introduction of the idea of “documented and objective science” could narrow down the flexibility of parties to select and apply applicable science. Concerns have been expressed regarding whether the flexibility of using “minority

\[\text{information and data produced by industry may not be published, which nevertheless can be relied on for risk assessment).}\]

86 SPS Agreement, supra note 5, arts. 5.2, 5.7.
87 CPTPP, supra note 18, art. 7.9, ¶ 5.
88 Id.
90 CPTPP, supra note 18, art. 7.9, ¶ 5.
science” as recognized by WTO jurisprudence could be undermined by the rigid approach. According to the Appellate Body’s rulings, WTO members are permitted to use minority views of the scientific community as the basis for decision-making as long as such views originated from qualified and respected sources. The question thus becomes whether a minority opinion that, despite being reputable, was not formally published or is just the result of “a small number of peer-reviewed studies” could be permissible under the high standard. This may depend on the interpretations of “documentation” for science.

iii. Risk Management

As mentioned, risk management is not explicitly recognized in the WTO/SPS Agreement. Nevertheless, the Agreement reflects certain elements of risk management in the allocation of the rights and obligations of WTO members. For example, Article 5.4 of the SPS Agreement recognizes the right of countries to decide their appropriate level of protection (ALOP), which constitutes a preliminary process of risk management. The Agreement further includes the mandates of necessity and non-discrimination in applying SPS measures. Of course, reflecting a precautionary principle or approach, the Agreement recognizes members’ discretion to adopt provisional SPS measures where scientific evidence is insufficient.

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91 Wagner, supra note 29, at 454.
93 Wagner, supra note 29, at 454–55.
95 E.g. MATSUSHITA ET AL., supra note 20, at 475–76.
96 See Australia – Salmon, supra note 89, ¶ 199. The Appellate Body also considered that the SPS Agreement also implied an “obligation” of WTO members to disclose their ALOP precisely. Id. ¶ 206. The WHO and FAO Guide specifies that the determination of an ALOP is critical when the selection of a risk management option is undertaken. See FAO & WHO GUIDE, supra note 2, at 29–31.
97 MATSUSHITA ET AL., supra note 20, at 486 (citing Appellate Body’s ruling on Australian Salmon).
98 SPS Agreement, supra note 5, arts. 5.5, 5.6.
99 See Appellate Body Report, EC – Hormones, supra note 46, ¶ 124 (recognizing that Article 5.7 reflects the idea of precaution without confirming whether it is a principle or an approach).
The CPTPP/SPS Chapter continues to extend certain regulatory autonomy to parties relating to risk management. It affirms the right of parties to establish their ALOP and preserves the right to implement SPS measures on a provisional basis. Concerning the obligations of parties conducting risk management, apart from reiterating the non-discrimination principle, the SPS adds, most notably, a procedural mandate requiring that risk management be conducted in a documented manner.

The SPS Chapter defines risk management as “the weighing of policy alternatives in light of the results of risk assessment and, if required, selecting and implementing appropriate control options, including regulatory measures.” This definition is quite similar to the general understanding of risk management found in the European General Food Law and WHO/FAO documents alike.

The SPS Chapter contributes to the legalization of risk management by incorporating international institutions’ efforts relating to risk management. For example, the WHO and FAO produced a guidance document for helping national food safety authorities to establish their risk analysis regime. This document provides a generic four-step framework for risk management: (i) preliminary risk management activities; (ii) identification and selection of risk management options; (iii) implementation; and (iv) monitoring and review. The CPTPP parties are required to “take into account” such arrangements. The framework remains non-binding on parties, but its incorporation to some extent may compel the revamping of national regulatory structures. Building a regime and framework not only requires rule-making and legislative efforts but also demands substantial expertise, management skills, financial resources, and capacity-building. The attempt to push the modernization of risk

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100 CPTPP, supra note 18, art. 7.9, ¶ 3(a).
101 Id. art. 7.9, ¶ 3(c).
102 Id. art. 7.9, ¶ 2.
103 European General Food Law, supra note 3, art. 3, ¶ 12.
104 FAO & WHO GUIDE, supra note 2, at 7.
105 See id.
106 Id. at 11, 15–35.
107 CPTPP, supra note 18, art. 7.9, ¶ 6(a) (emphasis added).
108 See FAO & WHO GUIDE, supra note 2, at xii (The Guide “provides essential background information, guidance and practical examples of ways to apply food safety risk analysis.”) Since the Guide is not of treaty format, it is not binding on nations per se.
management systems is indicative of the CPTPP’s ambition to set a new model for RTAs.

The SPS Chapter also requires parties to “consider” and “select” risk management options that are not more trade restrictive than necessary to achieve their ALOP and SPS objectives. The CPTPP text seems quite similar to that of WTO/SPS and reaffirms the principles of necessity and proportionality. Nonetheless, the arrangement literally reflects the WHO and FAO’s procedure for deciding among risk management options, which involves a dynamic process of identification, evaluation, and selection of risk management options. As mentioned, the SPS Chapter, like the WTO SPS Agreement, reaffirms the right of parties to determine their ALOP; however, both texts fail to clearly describe how ALOP can fairly function. By requiring the CPTPP parties to consider international guidelines, the WHO and FAO’s arrangements may help optimize competent national regimes.

When considering and selecting policy options, national authorities are normally expected to determine which level of protection is ideal and suitable for addressing specific food safety issues and risks. The work of the WHO and FAO has helped to clarify the status of ALOP by underscoring that “[t]he concept of ALOP . . . is essential in establishing the linkage between risk management actions and the level of consumer health protection achieved.” It also provides that “[a] range of tools or approaches are available to the risk manager in bridging between practical control measures and [the] level of consumer health protection.” With the availability of a clearer road map on which regulatory regimes can be based, the predictability and transparency of the process can be enhanced.

Overall, the influence of the international guidelines over the establishment of national regimes cannot be overemphasized. The original voluntary nature of these guidelines has to some extent

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109 CPTPP, supra note 18, ¶ 6(b), (c) (emphasis added).
110 SPS Agreement, supra note 5, art. 5.6.
111 \textit{Id.}
112 FAO & WHO GUIDE, supra note 2, at 24–33 (“Harmonized and transparent application of a RMF to identify and select risk management options in different countries should significantly advance the goal of preventing unjustified and unfair restrictions in the international trading of food.”)
113 \textit{Id.} at 30.
114 \textit{Id.}
been hardened by the CPTPP. However, it remains to be seen whether the requirements will limit the parties’ regulatory space in constructing their own best regimes per respective risk perceptions. Thus, the one-size-fits-all approach may continue to be of concern for its legitimacy.

iv. Risk Communication

The SPS Chapter defines risk communication as “the exchange of information and opinions concerning risk and risk-related factors between risk assessors, risk managers, consumers and other interested parties,” which is also in line with the widely recognized concept.115 In contrast to its provisions on risk assessment and risk management, the Chapter does not provide any specific requirements or obligations for parties to observe in doing risk communication.116 Nevertheless, as mentioned, the SPS Chapter mandates that relevant international documents play a major role in guiding national risk analysis.117 According to the WHO and FAO guidelines, the subject of risk communication involves multiple stakeholders, including risk assessors, risk managers, and external participants.118 Food authorities expect to form a unit with specialists responsible for communication, which could be integrated into “all phases of risk analysis” by their regulations.119 Indeed, many developed countries, including the CPTPP parties, have already implemented this task by setting up a specialized team for communication.120

The WTO/SPS Agreement did not explicitly stipulate risk communication nor any requirements for the process. However, Article 7 of the Agreement concerning transparency is a major mechanism by which the communication mandate can be fulfilled.121 WTO members are required to notify other members of their SPS measures and to keep them updated concerning

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115 CPTPP, supra note 18, art. 7.1, ¶ 2; see also FAO & WHO GUIDE, supra note 2, at 66; see also European General Food Law, supra note 3, art. 3, ¶ 13.
116 See CPTPP, supra note 18.
117 Id. art. 7.9, ¶¶ 2, 6(a).
118 FAO & WHO GUIDE, supra note 2, at 66.
119 Id. (emphasis added).
120 For example, the Japan Food Safety Commission is composed of seven commissioners, including one who has expertise in risk communication. See, e.g., FOOD SAFETY COMMISSION OF JAPAN, fsc.go.jp/english/aboutus/members_com.html (last visited Oct. 25, 2019).
121 SPS Agreement, supra note 5, art. 7.

Achieving greater transparency in the decision-making process has become a commonly-pursued agenda in current RTA/FTA negotiations. Both the CETA and EPA aimed to improve the quality of transparency for SPS measures. In terms of trade in agricultural products, the deficiency of transparency that constitutes a type of NTB has more direct and stronger effects than a tariff does. Thus, the efforts of the RTA were acclaimed because they were credited with “introducing new obligations that strengthen the ex-ante and ex-post transparency requirements related to the design and application of standards and establishing improved web-based information systems and consultation processes that include interested foreign parties.”

In line with the developments, the CPTPP SPS Chapter elaborates and enhances the level and contingency of transparency. An apparent discrepancy between the WTO SPS arrangement and that of the CPTPP is that the former largely entails one-way communication from national authorities to other members, whereas the latter strengthens mutual understanding and information exchange among governments and relevant stakeholders.

The CPTPP Chapter also endeavors to improve the notice and comment procedure, which may strengthen the input of outward advice. The attempt reflects the administrative practice of the U.S. and was one of the main negotiation pieces put forward by the country. The Chapter provides more stringent requirements on the time for comments and how the parties proposing SPS measures shall interact with their counter-parties.

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122 See id.
123 See id. Annex B.
124 CETA, supra note 8, ch. 5, arts. 5.11–5.12.
125 Economic Partnership Agreement, supra note 8, ch. 6, arts. 6.11, 6.12, 6.15; ch. 17.
126 See Ash & Lejarraga, supra note 22, at 80–81.
127 Id. at 80.
128 CPTPP, supra note 18, art. 7.13.
129 Administrative Procedure Act, 5 U.S.C. 553 (2016); see also Wagner, supra note 29, at 464–65 (discussing the merits and problems of incorporating such a practice).
130 See JOHNSON, supra note 28.
The WTO/SPS Agreement only requires a “reasonable” time for members to make comments. By contrast, the SPS Chapter specifies a fixed time of at least 60 days.

The methods of discussion and communication among parties under the CPTPP arrangements are relatively more proactive than reactive. The required exchanges are more comprehensive and meaningful. WTO members must “discuss these comments upon request, and take the comments and the results of the discussions into account.” The SPS Chapter strengthens the interaction by adding that “on request of another Party, the Party shall respond to the written comments of the other Party in an appropriate manner.” Because the SPS Agreement only requires members to exchange opinions on “comments,” the content of the discussion has also been elaborated in the Chapter to include “any scientific or trade concerns” raised by other parties and “the availability of alternative, less trade-restrictive approaches for achieving the objectives of the measure.”

If parties’ SPS measures are not in conformance with international standards, the SPS Chapter furthers the scope and content of the notification. These countries are obliged to provide more thorough information, which has not been specified under the WTO agreement, such as documented and objective scientific evidence.

The SPS Agreement only suggests that WTO “members” can benefit from the merit of transparency. The CPTPP in particular aims to ensure that the general public is entitled to access the information in question, including the proposed measure, the legal basis for the measure, and the written comments received by the party. Therefore, if implemented appropriately, the design may help promote the realization of democratic decision-making by

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131 SPS Agreement, supra note 5, Annex B, ¶ 5(d).
132 CPTPP, supra note 18, art. 7.13, ¶ 4.
133 Ragnar E. Lofstedt, Risk versus Hazard—How to Regulate in the 21st Century, 2 EUR. J. RISK REG. 149, 166-67 (2011) (describing how proactive risk communication can achieve better public trust compared to reactive communication).
134 SPS Agreement, supra note 5, Annex B, ¶ 5(d).
135 CPTPP, supra note 18, art. 7.13, ¶ 4 (emphasis added).
136 Id. art. 7.13, ¶¶ 4, 7.
137 Id. art. 7.13, ¶ 6.
138 SPS Agreement, supra note 5, Annex B, ¶ 5, 6.
139 CPTPP, supra note 18, art. 7.13, ¶ 5.
bound parties.

The CPTPP’s approach is not entirely novel, but rather, reflects international and certain national practices. Nevertheless, its progressiveness distinctive from the WTO SPS Agreement is quite obvious and meaningful. The policy that places parties’ trading partners, interested persons, and the general public in beneficial positions may result in a more open, reasonable, non-arbitrary, and democratic decision-making process.

IV. Problems and Challenges with Implementing the SPS-Plus Requirements

The SPS Chapter exhibits a strong intent to incorporate a risk analysis regime into national SPS regulations. Requiring the provision of solid scientific evidence to justify their measures could impose considerable burdens on less developed countries. Some of them may face difficulties in accessing the necessary science and technology. They may not be able to comprehend recent relevant data. It seems too onerous to expect them to have the same level of science and technology rigor as those CPTPP-developed parties. Given these scientific gaps, the implementation problem cannot be ignored.

Many CPTPP parties that are strong in agricultural exports, such as New Zealand, Canada, and Australia, would benefit from importing countries making a real commitment to and enforcing science-based SPS measures. These developed countries have already established relatively sound risk analysis regimes140 and may have no trouble implementing the mandate.141 Japan, which

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141 The New Zealand government stated that “nothing in the SPS Chapter would require New Zealand to change our approach to protecting human health, maintaining food safety, and protecting New Zealand’s animal and plant health status from pests and diseases. As a result, there are no disadvantages to New Zealand entering CPTPP from an SPS perspective.” See, e.g., N.Z. FOREIGN AFFAIRS & TRADE, COMPREHENSIVE AND PROGRESSIVE AGREEMENT FOR TRANS-PACIFIC PARTNERSHIP NATIONAL INTEREST ANALYSIS 33 (2018), https://www.mfat.govt.nz/assets/CPTPP/CPTPP-Final-National-Interest-Analysis-8-March.pdf.
has tended to fill the leadership vacuum caused by the departure of
the U.S., has confidence in ensuring compliance with the risk
analysis standards.\textsuperscript{142}

Achieving the sound operation of a risk analysis regime
always involves a costly and time-consuming process of capacity
building. Many less developed countries in this region may face
hurdles in overcoming the challenges. Moreover, some competent
national food safety regimes have yet to mature.\textsuperscript{143} If little or no
sound science can be produced to justify trade restrictions, these
importing countries have little choice but to adhere to international
standards\textsuperscript{144} that may not always accommodate their specific
public health concerns. The high standard of the CPTPP may also
dissuade countries from seeking accession to the agreement if the
cost of compromising their policy freedom proves unaffordable.\textsuperscript{145}

All parties should work together to mitigate the problem of
“technoimperialism,” that seeks to impose the high standards of
developed countries upon less developed countries without
meaningful input from the latter.\textsuperscript{146} Assisting these countries in
adapting to the stricter regulatory requirements is also indispensable.
International regulatory cooperation can play a critical role in
promoting coherence and harmonization of regulations and
practices among parties.\textsuperscript{147} Regarding risk assessment, regulatory
cooperation can cover “dialogue, information sharing, and scientific
fact-finding” and be fulfilled “by examining the science behind
various regulatory approaches and determining which approach
aligns with prevailing scientific knowledge.”\textsuperscript{148} Given that risk
management is a relatively subjective process involving

\textsuperscript{142} Interview with Japanese officials responsible for food safety on September 6,
2016 (on file with the author).
\textsuperscript{143} According to the USDA’s study, Vietnam’s “regulatory and food safety regime
is still in its infancy and testing agencies are limited, leading to inconsistent
enforcement which adds to uncertainty for foreign producers.” \textit{See U.S. DEP’T OF
AGRIC., VIETNAM’S AGRI-FOOD SECTOR AND THE TRANS-PACIFIC PARTNERSHIP 14
v=0.}
\textsuperscript{144} \textit{See CPTPP, supra note 18, art. 7.9, ¶ 2.}
\textsuperscript{145} Despite having signed the CPTPP, it remains unclear whether Malaysia may
eventually ratify the agreement, and this is because the high standards may
constrain its regulatory autonomy. \textit{See Martin Khor, Should Malaysia Ratify the
asia/se-asia/should-malaysia-ratify-the-cptpp-deal-the-star-columnist?.}
\textsuperscript{146} Marks, \textit{supra} note 47, at 62–63 (illustrating that TPP may have fostered
technoimperialism).
\textsuperscript{147} \textit{Id.} at 14–15.
\textsuperscript{148} \textit{Id.} at 45–46.
policy-making, regulatory cooperation may not necessarily be feasible.\footnote{Id. at 45–47.}

The CPTPP does provide mechanisms to facilitate regulatory cooperation. The SPS Chapter requires the establishment of a Committee on Sanitary and Phytosanitary Measures.\footnote{CPTPP, supra note 18, art. 7.5, ¶ 1.} Apart from enhancing the implementation of the Chapter, this Committee is tasked with promoting cooperation between parties through which information exchange can occur. However, the task of engaging in technical assistance and cooperation projects remains optional.\footnote{Id. art. 7.5, ¶ 3(e).} Additionally, the CPTPP creates a new chapter on regulatory coherence in which regulatory cooperation and capacity building are given as mandates.\footnote{CPTPP, supra note 18, art. 25.2, ¶¶ 1, 2(e); see also Marks, supra note 47, at 58 (stating that the CPTPP is the first trade agreement to include regulatory coherence).} A Committee on Regulatory Coherence will be established\footnote{CPTPP, supra note 18, art. 25.6, ¶ 1.} to supervise regulatory cooperation that “may” include “information exchanges, dialogues or meetings with other Parties and interested persons, training programmes and relevant assistance, and other activities between regulatory agencies.”\footnote{Id. art. 25.7, ¶ 1 (emphasis added).} It remains to be seen whether the soft commitment to technical and other substantial support can effectively relieve the less developed countries’ burden.

Overall, the CPTPP’s ambition to optimize national SPS regulations cannot be fulfilled without genuine collaboration, experience-sharing, and technological and financial assistance.\footnote{See, e.g., Phoenix X. F. Cai, Regulatory Coherence and Standardization Mechanisms in the Trans-Pacific Partnership, 5 BR. J. AM. LEG. STUDIES 505, 537-38 (2016) (observing that the efforts of capacity building can ensure the success of regulatory coherence and cooperation).} The full realization of the SPS-plus goals will, to some extent, depend on the goodwill and actions of the CPTPP parties that possess sufficient capacities.

V. Concluding Remarks

The requirement for building a sound risk analysis regime is indicative of the CPTPP’s pursuit of high standards in food safety
The substance of the risk analysis is a blend of WTO jurisprudence, international standards, and national practices, especially those of the U.S. Observing how this RTA’s proposed mechanism may interact with the relevant law-making of the WTO and thus enable the multilateralization of RTA-plus is appealing.\(^\text{157}\) The influence of CPTPP’s model of risk analysis could be strong upon the parties’ will to cooperate and act in good faith.

This lofty regulatory requirement may not be difficult to meet for some parties, such as Japan, Australia, and Canada. However, given the complexity of the system and the necessity for major capacity building and interdisciplinary professions, it would be undesirable for less developed countries to be required to attain the same level as countries that have substantial experience and practice in this regard.

The requirement of scientific risk assessment does raise the level for admissible scientific evidence. It would place the science used by the parties under scrutiny. Nonetheless, the credibility of scientific findings would not be subject to dispute settlement under the CPTPP, which can thus reduce the pressure on the parties, leaving them some leeway vis-à-vis regulatory space and autonomy.

Many Asian countries face the challenge of balancing the promotion of food trade with the protection of citizens from the risks engendered by imported food. For example, Korea and Taiwan have prohibited the import of potentially radioactive foods from Fukushima, Japan, for many years. Although the food risks have gradually decreased, those countries are still hesitant to lift the ban, and this is not necessarily only because of health concerns but also for social or political reasons. However, if the risk analysis system can fairly be incorporated into domestic regimes, it may allow countries to construct a better mechanism that streamlines decision-making based on scientific evidence and public participation rather than yields to political interests.

The CPTPP risk analysis approach may provide momentum to rationalize and democratize national food safety regulatory regimes. However, it may also restrict importing countries’ autonomy for food regulations, forcing them to stick to mainstream science-based standards normally evidenced in international agreements and practice. This article has argued that the extension

\(^{157}\) See Ash & Lejarraga, *supra* note 22, at 76–77, 81 (arguing that the trend of RTA-plus, especially in the agricultural sector, is expected to be multilateralized, but conceding that it may be subject to political will).
of good faith technical and capacity-building support from developed parties and full commitments to regulatory cooperation may alleviate difficulties in compliance.
The Marketing of Self-Care and Alternative Therapies in the U.S. in 2019: How Industry Stakeholders Appeal to Consumers’ Perceptions of Novel Food Products and Additives

Melanie Marie Glover*

Abstract

This article examines the current marketing techniques of food products and additives in the growing self-care industry in print and digital formats. It assesses how well consumers understand such advertising tactics, and what the industry and federal government agencies are doing (or not doing) to help consumers be mindful and savvy about their purchase choices. The discussion further showcases hot-topic food products and additives including CBD, Kratom, and plant-based meat as examples of both regulatory risk and opportunity. Lastly, the article advocates a collaborative effort among federal government agencies (FDA, FTC, USDA, etc.), industry stakeholders, and the public to help accurately define not only the risks of food products and additives in the self-care space, but also the necessary regulations to keep consumers informed and empowered both in stores and online.

I. Introduction

How consumers understand the messaging around a consumer good is not a novel issue.1 For decades, not only the United States (U.S.) federal and state governments, but also private industry stakeholders have toiled to protect the consumer from misleading product messaging.2 However, given the rise in certain “natural,” self-care products containing food and other ingestible

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2 See, e.g., Kordel, 335 U.S. 345 (consumer protection case); see also Jonathan Stempel, Five More U.S. States sue OxyContin Maker Purdue Pharma Over Opioid Epidemic, REUTERS (May 16, 2019), https://www.reuters.com (search article title and select first result); see also Lenny Bernstein, Five More States Take Legal Action Against Purdue Pharma for Opioid Crisis, WASH. POST, (May 16, 2019), https://www.washingtonpost.com (search article title and select first result).
ingredients, that messaging is growing more complex, less understood, and more easily misconstrued.

Advertising and marketing strategies have hinged for years on the emotional and social value of food and food-related products, and their tactics have worked. Devour Tours, a Spanish start-up company, promotes itself with its values of connecting people to local culture (Spain, France, Portugal, and Italy) through the experiences of seeing, tasting, smelling, touching, and devouring foods and beverages. The Culinaria book series and The Food Lover’s Handbook are other modern examples of food sold through authentic cultural lessons and culinary experiences. Even Starbucks’ business model rests on connecting the consumer to his or her cup of joe along with comforting encounters with plush sofas and chairs. Similarly, by helping the consumer understand the emotional connection between a product and a desirable experience, marketers of self-care products are testing the waters by adapting their strategies to remain relevant and competitive, and they are just getting warmed up.

II. What is the “Self-Care” Industry, and Why is it Exploding?

The self-care industry is booming. In a time of ever-increasing healthcare costs, consumers prefer more options and

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4 See generally MARION TRUTTER, CULINARIA SPAIN: A CELEBRATION OF FOOD AND TRADITION (2015) (a unique cookbook that offers cultural lessons with glimpses into various Spanish cooks’ recipes and meal preparations through their personal and family stories in Spain); JODI ETTENBERG, THE FOOD TRAVELER’S HANDBOOK (Full Flight Press, 2012) (a former lawyer and current food guru’s journey into Asian cuisine through travel, tourism, and curiosity).
alternatives to manage their own health. 9 “Self-care” means those “decisions people make or activities they participate in to ensure health and wellness for themselves and their families.” 10 Self-care refers to the accumulated habits, benefits, and solutions that consumers implement themselves over time; in this way, self-care is preventive medicine, and it can cost less than prescription drugs for treatment. 11 Over-the-counter remedies are chief examples of such self-care products that consumers can control for themselves. “Alternative therapy,” the use of homeopathic products and other at-home remedies that tout themselves as being gentler for the human body, is another such example. 12

Consumers nowadays also have access to more information than ever, and they are using it to explore self-care and alternative therapies to better control their well-being. Examples of trendy self-care consumer goods include: products marketed as “natural,” “chemical free,” lifestyle products, probiotics, vaping technologies, cannabidiol (“CBD”), food additives, dietary supplements, vitamins, nasal sprays, personal hygiene products, sleep remedies, body scrubs, skin care and other topical remedies, suntan products, oral care products, etc. 13 The plethora of self-care, over-the-counter

9 IRi, supra note 6, at 2.
10 Id. at 1.
11 Id. at 3.
12 Id. at 2.
options available is giving consumers a lot of reasons not to visit the doctor for a prescription.14

Digital health resources, online medical advice and e-visits, and personalized electronic marketing strategies are also emerging offerings in the self-care space due to consumer demand for convenience and the rise in online retailers marketing specialty, “more natural” consumables that are easily accessible for consumers.15 Burt’s Bees, the Honest Company, and other wellness companies are convincing consumers that their more “natural” products will help consumers feel better in their daily lives.16 The social media marketing of food and food-related products is also a hot topic among lawyers and legal professionals attempting to understand the current advertising landscape for such products.17 The rising self-care industry has developed slogans such as “Gen Well,”18 “better for me” products and therapies,19 and “free from [insert a chemical or ingredient].” Self-care and alternative therapies are available anytime to consumers digitally or over-the-counter in retail stores. Moving forward, the industry may develop even further

14 IRi, supra note 6, at 1 (stating that 47% of millennials and 41% of Gen Xers avoid visiting the doctor).
15 See, e.g., Digital Health Research Resources, UNIV. OF CAL. SAN FRANCISCO RES. CONSULTATION, CLINICAL & TRANSITIONAL SCIENCE INSTITUTE, https://consult.ucsf.edu/guidance/digital-health (last visited Nov. 3, 2019); IRi, supra note 6, at 1; see also Serra J. Schlanger & Rachael E. Hunt, Telemedicine, Understanding the FDA’s Role in Recent Regulatory and Enforcement Actions, COMPLIANCE TODAY (July 2019), https://compliancecosmos.org/telemedicine-understanding-fdas-role-recent-regulatory-and-enforcement-actions?authkey=410f81ecc4545f0d3d381cf44ac4529e69301e2ed12386e0ab2e129e22e38f6e6c.
17 For example, the Food and Drug Law Institute hosted a conference in September, 2019 about label claims and substantiation, plant-based food products, and social media marketing. FOOD AND DRUG LAW INST., https://www.fdli.org/2019/09/food-advertising-labeling-and-litigation-conference/ (last visited Nov. 10, 2019).
18 See Katie Nermoe, Millennials: The ‘Wellness Generation’ (Sept. 12, 2018), https://news.sanfordhealth.org (when you access the site, search “Wellness Generation” in the search bar at the top right where it says, “What can we help you find?”; the first option will be the article by Katie Nermoe); GENWELL PROJECT, https://genwellproject.org/ (last visited Nov. 7, 2019).
19 IRi, supra note 6, at 2.
ways to access these products. Still further, there has been an increase in recent years in the use of smart phone applications and personal counting devices, which range from watches to fitness bracelets, constantly measuring and storing data about an individual’s state of health.20

Despite the interrelated yet competing interests and novelty of this social, business, and medical phenomenon, self-care and alternative therapies may genuinely help provide wellness solutions for consumers’ health issues.21 Consumers are seriously interested in greater self-management of their health conditions using products that empower them to proactively prevent or help treat health conditions.22

Even given their growing enthusiasm for the self-care industry, however, consumers should be skeptical because many questions remain unanswered. These questions include but are not limited to: what does the product regulatory/consumer goods industry understand to be a “self-care” remedy or product; what is the “reasonable consumer” standard for understanding the marketing around a product;23 are food products, dietary supplements, and other alternative therapies marketed differently nowadays than their counterparts were a decade or more ago; and what impact does this have on consumers’ purchases? Additional industry-specific questions include: do industry stakeholders/food producers/dietary supplement manufacturers need to market differently new food, food additives, dietary supplements, and alternative therapies consumed

23 FED. TRADE COMM’N, ADVERTISING FAQ’S: A GUIDE FOR SMALL BUSINESS, https://www.ftc.gov/tips-advice/business-center/guidance/advertising-faqs-guide-small-business (last visited Nov. 7, 2019) (stating that the “reasonable consumer” is the “typical person looking at the ad” and that the ad will be viewed “in context—words, phrases, and pictures—to determine what it conveys to consumers”).
by humans (given the novel and nuanced nature of these products, the rising self-care and wellness industry, and the online selling of consumable food products and dietary supplements);\textsuperscript{24} does online selling and consumers’ increased access to food products, dietary supplements, and other alternative therapies present increased risks to consumers such that the marketing of these products needs to use more careful, precise, and transparent messaging and positioning; and do consumers understand the health risks and benefits of food products, food additives, dietary supplements, and alternative therapies sold online as well as they understand the same store-bought or traditional retailer-sold products?\textsuperscript{25} Finally, what is the role of technology in relation to these self-care products (e.g. digital health, artificial intelligence, and online selling of self-care products) (e.g. public accessibility to food products and product descriptions and reviews as advertisements), and is the product for sale a food or a drug, and if both, how should it be regulated?\textsuperscript{26} These questions

\textsuperscript{24} See generally Vivekanand Sharma et al., Identifying Complementary and Alternative Medicine Usage Information from Internet Resources: A Systematic Review, \textit{5 METHODS INF. MED.} 322–332, (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4975632 (providing a broad overview of research relating to such concerns).

\textsuperscript{25} See Why Are Complementary and Alternative Therapies Harder to Evaluate? The Treatments Are Assumed to Be Safe, \textit{AMERICAN CANCER SOCIETY}, https://www.cancer.org/treatment/treatments-and-side-effects/complementary-and-alternative-medicine/complementary-and-alternative-methods-and-cancer/why-cam-is-hard-to-evaluate.html (last visited Nov. 7, 2019) (describing the problems that arise when alternative therapies such as herbal remedies advertise a product untruthfully, which poses the question of how companies offering legitimate alternative therapy options will verify and market their products to consumers); see also Integrative Medicine: Find Out What Works, \textit{MAYO CLINIC}, https://www.mayoclinic.org/tests-procedures/complementary-alternative-medicine/in-depth/alternative-medicine/art-20046087 (last visited Nov. 9, 2019) (giving guidance to consumers considering the use of alternative therapies and medicines and warning of potential pitfalls); \textit{NAT’L CTR. FOR COMPLEMENTARY AND INTEGRATIVE HEALTH, DEP’T OF HEALTH AND HUMAN SERVS.}, Finding and Evaluating Online Resources, https://nccih.nih.gov/health/webresources#hed2 (last visited Nov. 8, 2019) (addressing the concern that consumers searching for alternative therapies online may not be able to discern the good from the bad and offering particular advice for navigating the Internet for alternative therapies).

\textsuperscript{26} Food and Drug Admin., Scientific Data and Information About Products Containing Cannabis or Cannabis-Derived Compounds; Public Hearing; Request for Comments, \textit{REGULATIONS.GOV} (Apr. 3, 2019), https://www.regulations.gov/document?D=FDA-2019-N-1482-0001 (explaining that where manufacturers have added CBD to food products, such products violate the FD&C Act because FDA has approved CBD as an active ingredient in a drug; this reality highlights the main FDA concern about how to regulate food products that contain active ingredients in approved drugs); FDA Warns Company Marketing Unapproved Cannabidiol Products with Unsubstantiated Claims to Treat Cancer, Alzheimer’s Disease, Opioid Withdrawal, Pain and Pet Anxiety, \textit{FOOD AND DRUG ADMIN.} (July 23, 2019), https://www.fda.gov/news-events/press-announcements/fda-warns-company-mark
help shape the scope of the trending and lingering debate about government regulation over certain food-drug hybrid products, and the evaluation is just beginning.

III. Is There a Standard Level of Understanding that May Apply to All Consumers?

The Federal Trade Commission (“FTC”) is the leading authority on the reasonable consumer standard. According to the FTC, a reasonable consumer is a typical one. In cases of advertising uncertainty, the FTC focuses its analysis on whether the advertisement would have misled or deceived a reasonable, unsophisticated consumer. For example, in the context of the FTC’s recent enforcement action against Amazon for misleading in-app purchases directed at children, the FTC reminded advertisers that “under the FTC Act, it’s wise to view your transactions from the perspective of a reasonable consumer, not a customer already familiar with your products and billing practices.”

One consumer-friendly marketing technique that self-care companies are using involves creating product packaging that resembles a food or beverage product to demonstrate more natural, less-processed benefits to human health. A second marketing technique is personalization and customization to comply with consumers’ preferences by using consumer insights research. Still another technique “embrace wellness-focused lifestyles” or experiences (e.g. rock-climbing and dancing, eating whole foods, etc.). Finally, there is the convenience and efficiency of online nutritional counseling and medical and health-related advice.

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27 Preston, supra note 1.
29 Id.
30 Lesley Fair, 7 Quotes of Note from the Amazon Decision, FED. TRADE COMM’N (May 3, 2016, 12:23 PM), https://www.ftc.gov/news-events/blogs/business-blog/2016/05/7-quotes-note-amazon-decision.
31 IRi, supra note 6, at 8–9.
32 Id. at 10–11.
33 Id. at 5, 7.
34 Id. at 11.
techniques are among the more positive, less misleading ones. The deception, however, lies in the claims—both explicit and implicit—of health-related consumer goods products.

IV. What is the Regulatory Framework for Food-Related Health Claims?

The Food and Drug Administration (“FDA”) regulates three types of health claims. The first is nutrient content claims, which characterize the level of nutrients in a food (e.g. “high,” “low,” or “free of” fats, sodium, and other nutrients). The second type of claims the FDA regulates are “structure-function” claims, which tell a consumer how beneficial a product could be for their health (e.g. “calcium builds strong bones”). The third type of claims are qualified health claims. Qualified health claims include statements about how certain food products may reduce the risk of disease or other health-related conditions (e.g. products claiming they can lower the consumer’s chance of heart disease or cholesterol levels). The issue with food products and additives today is that their accompanying claims may fall into two or more of these areas. This reality challenges the FDA’s current framework of regulating drug messaging or drugs positioned as foods because: what if the product is or could be both?

V. What are Today’s Popular Food Products and Additives, and How are they Advertised?

The current commercial landscape for food-related products includes novel products such as plant-based food and food additives (e.g. meat, milk, mayonnaise, CBD, and other plant-infused products) that appeal to environment and human health-conscious consumers whose interests include weight and pain reduction and management. Marketers for food manufacturers are selling these products as a healthy, self-care, or euphoric experience by creating a...

36 Id.
37 Id.
38 Id.
39 Id.
message that encourages an emotional or social response from using or interacting with the product.\textsuperscript{41} There is also a market trend toward inserting plant-based food additives into food or dietary supplements and using them as an attractive, eye-catching ingredient in other consumable products.\textsuperscript{42} This discussion focuses on these product categories, but the marketplace is ripe with several other types of food products and dietary supplements with similar claims issues of which consumers should beware.

Plant-based products currently in the public and regulatory eye include CBD, Kratom, and plant-based meat.\textsuperscript{43} This paper discusses how manufacturers and retailers market these plant-derived foods and food additives, how consumers understand such advertisements, and the potential health risks involved. This discussion ends with a glimpse into the regulatory framework (or lack thereof) for advertising these products. Finally, the paper sets forth potential solutions that industry stakeholders, the U.S. federal government, and consumers can advocate for and implement in the near future and in the long-term.

\textbf{A. CBD}

Regulatory concern is most prominent in the CBD arena because CBD is popping up everywhere.\textsuperscript{44} Convenience stores, pharmacies, and even strip malls increasingly boast CBD

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\textsuperscript{42} July through August 2019, a drive down Highway I-131 near the downtown Grand Rapids, Michigan area revealed a large display sponsored by Harvest Health Foods, a local grocery store chain, with “CBD” displayed in big, bold letters across the billboard, broadcasting the benefits of CBD. \textit{CBD Oil}, HARVEST HEALTH FOODS, https://harvesthealthfoods.com/tags/cbd-oil (last visited Nov. 26, 2019).
\end{flushleft}
inventory. To start, the Cannabis sativa plant comes from the
Cannabaceae plant family, and it contains active chemical
compounds such as delta-9-tetrahydrocannabinol (“THC”) and
CBD. The Federal Controlled Substances Act (“CSA”) has
controlled parts of the plant since 1970 under the drug class
“Marihuana.” “Marihuana” is listed in Schedule I of the CSA
because of the psychoactive effects of THC, and the federal
definition of “Marihuana” is “all parts of the plant Cannabis sativa
L.” The Farm Bill of 2018 legalized the sale of hemp-derived
products while directing the U.S. Department of Agriculture
(“USDA”) to develop regulations clarifying hemp use on a federal
level. The gap, however, arose when Congress stayed silent on the
FDA’s role in regulating products derived from cannabis or hemp
under the Food Drug and Cosmetics Act (“FD&C Act”). Some
industry stakeholders have advocated for Congress to consider
carving out an exception under the “Marihuana” definition to exclude
cannabidiol from its definition like hemp.

The wide availability of CBD—evidenced by its various
advertising forms—leads consumers to believe that it is lawful to
purchase and consume. The following photos depict real-life
advertisements of CBD for sale in the West Michigan area.

45 See Sean Williams, CBD: Coming to Chevron, Shell, ARCO, BP, Sunoco, or 76
Station Near You, FOOL (June 14, 2019), https://www.fool.com/investing/2019/06/14/cbd-coming-to-a-chevron-shell-arco-bp-sunoco-or-76.aspx; see also Sean
Williams, This CBD Stock is Quietly Becoming a Retail Giant, FOOL (July 13, 2019),
https://www.fool.com/investing/2019/07/13/this-cbd-stock-is-quietly-becoming-a-
retail-giant.aspx.
46 See U.S. FOOD & DRUG ADMIN., FDA REGULATION OF CANNABIS, supra note 43.
48 Id.
49 7 U.S.C § 5940 (2019).
50 21 U.S.C. § 802(16)(B)(i) (2019); Sarah Sorscher, Deputy Dir. of Regulatory
Affairs, Ctr. for Sci. in the Pub. Interest, Presentation at the FDLI Annual
Conference: Marijuana, CBD, and Hemp: Understanding the Current Regulatory
Landscape and How it Might Change (May 3, 2019).
The advertisement disappeared on Sunday, July 7, 2019. Similarly, an online retailer, Thrive Market, pulled CBD products in June 2019 after its merchant processor expressed concern over the products’ legal status. In addition, Curaleaf Inc., a cannabis company, removed health claims about CBD products from its website after receiving a warning letter from the FDA in July 2019.
The FDA is focused on the cumulative exposure to CBD across a broad range of products. This is because edibles may have a longer delay in onset than inhaled products, difficult to control dosage, and higher risk of poisoning. The pricing, direct, and implied claims on a product may also cause confusion for a consumer. For example, does putting a premium price on a CBD product suggest or imply a claim that it is valuable for some specific—albeit unspoken—purpose? What claims might a company be making by not saying anything?

The images below represent a fictional advertisement (although inspired by a real website and company) of CBD claims to further illustrate regulatory concerns about its widespread sale. This exercise demonstrates the expansive range of legal issues related to explicit and implicit claims involved in the marketing of an emerging self-care health product like CBD-infused nasal spray.

Figure 3. Fictional CBD Product.

53 Riëtte van Laack, FDA Encourages Food Industry to Use “Best if Used by” Date for Self-Stable Foods, FDA LAW BLOG (June 4, 2019), http://www.fdalawblog.net/ (search “FDA Encourages Food Industry”).
54 The inspiration for the product can be found at the following website, however, all claims and copy on the images included in this research paper were created for educational and discussion purposes: https://hhoutlet.com/products/hemp-cbd-nasal-spray-new. Graphics by Theresa Fernández, http://www.theresafernandez.com/.
The advertisement in Figure 4 showcases a multitude of the FDA’s concerns about the presence, labeling, and marketing of CBD as an ingredient in food products, dietary supplements, and cosmetics. The sale of these products over the Internet adds to the FDA’s concern for consumers who have little to no opportunity to interact with a knowledgeable salesperson or health professional; there is oftentimes no pharmacist available to answer questions digitally (yet). Unfortunately, the rise in digital health mixed with novel products means more room for misdiagnoses and human error in the mismanagement of treatments, prescriptions, and medicine consumption. The electronic marketing mediums also carry their own risks inherent to advertising products on the Internet or through applications; the risk for misinterpretation and lack of information due to the speed at which consumers browse the Internet and scroll and click through their smart phones increase the likelihood of a misinformed or underinformed consumer.

This product demonstrates the numerous issues that the FDA and FTC can and should regulate. First, the claim, “Healthy Hemp-
CBD Lavender-Scented Nasal Spray,” is misleading because hemp and CBD are now regulated differently after the passage of the Farm Bill of 2018.57 Likewise, the meaning of “healthy” has not yet been (re)determined on a federal level despite receiving FDA enforcement attention;58 therefore, there exists risk of consumer confusion in using this term. Second, the claims that the CBD can “manage pain, treat seizures, and prevent the early onset of dementia” are unapproved drug claims because they convey that the product’s intended use is to treat or prevent dementia and seizures and otherwise affect the structure and function of the human body, and therefore the sentence is misleading.59 Third, the suggested dose
states “take as needed.” This statement raises the FDA’s well-known concern about the efficacy of CBD: how much spray is needed for the product to “work?”

Fourth, the optics of the marijuana leaves on the nasal spray bottle packaging with lavender accent colors may make implied claims; in other words, consumers may interpret these graphics to mean that the nasal spray product contains a pharmacologically active ingredient or THC, or that it produces some other psychotropic effect. Fifth, the claim that “nasal delivery means quick absorption; gummies and capsules can take up to an hour!” lacks supporting research as of the time of writing this paper. The FDA’s concerns are with dosage levels due to the various forms that CBD can be ingested. What if a person consumes both gummies and a nasal spray within a limited amount of time? How will the FDA regulate such dosages? Currently, there is no warning about the effect on the human body of taking CBD in multiple forms, and the FDA has invited industry stakeholders to conduct and share this research for increased understanding about CBD’s effects when combined in various ingestible products.

Sixth, the language “read about our blog post on the therapeutic effects of Healthy Hemp-CBD Lavender-Scented Nasal Spray HERE” is problematic because the blog post may contain additional unapproved drug claims or other misleading language that encourage a consumer to purchase the CBD product. The question becomes whether the content on the blog contains additional advertising or labeling about the product due to the proximity of the link to the product (on the product packaging).
Sellers of such products must be aware that related advertising material such as a blog post or an online article may be interpreted to be part of the product labeling and, therefore, subject to FDA regulations just like traditional product labels. Finally, the “try other Healthy Hemp products” section featuring other CBD-infused products creates concerns that (1) these products may have unapproved drug claim issues, and that (2) the lack of warnings about the effects on the human body when taking two or more simultaneously may harm consumers. To address this, in the spring of 2019, the FDA invited industry stakeholders to submit their research findings on the effect of various CBD-infused products to help the FDA begin to understand how these CBD-infused products may affect humans if ingested together depending on the dosage.

The issue of food fraud, as it relates to the Cannabis plant and children, is also a risk to consumers that concerns the FDA. A recent case involving THC-infused gummies (“Stoney Kids,” a candy in packaging eerily resembling that of the popular candy, “Sour Patch Kids”) reveals growing anxiety over the marketing of edibles to children by mimicking common snacks and candies. Mondeléz Canada has not only sued the manufacturer of the THC-infused gummies for trademark infringement and dilution; the Sour Patch Kids manufacturer also alleges that Stoney Kids violates California’s Medicinal and Adult-Use Cannabis Regulation and Safety Act because Stoney Kids directly targets children with its striking resemblance to Sour Patch Kids. The timing of the Stoney Kids suit is particularly concerning considering the national and state-level debates occurring over CBD, THC, and related plant-derived food additives.

B. Kratom

Yet another ingestible self-care product is Kratom. While not as much of a household name as CBD arguably is, Kratom is

64 See Kordel, 335 U.S. at 351; 24 Bottles of Sterling Vinegar & Honey, 338 F.2d at 159.
67 Id.
similar to CBD in that it is underregulated, is for sale online and over-the-counter, has alleged psychotropic and therapeutic effects, comes from a plant, and can be added to food. Kratom’s scientific name is Mitragyna Speciosa, derived from a tropical tree indigenous to Southeast Asia. While Kratom and CBD have different regulatory histories (as of the writing of this paper, the U.S. Drug Enforcement Agency has announced its intent to schedule Kratom as a controlled substance), their similarities are significant. This means that market and consumer interest in Kratom are just as concerning as CBD for many of the same reasons. However, Kratom may deserve more immediate attention from regulators based on allegations that it can produce euphoric or psychotropic effects comparable to those that opioids produce in humans. While consumer-facing efficacy claims about Kratom range from mild to effective for managing pain, the regulatory dust is far from settling on Kratom. In an interview with Michigan Public Radio on July 17, 2019, University of Michigan Addiction Treatment Services psychiatrist, Edward Jouney, warned consumers to “scrutinize the source” from which Kratom is coming because “this is something that has the potential to be very powerful” for vulnerable populations who tend toward addictive behavior. The FDA has also publicly denounced Kratom, warning consumers that its health impact is not yet well understood. Like CBD, dosages for Kratom are not yet well-researched, leaving consumers precariously exposed to likely unjustified claims.

C. Plant-Based Meat, Mayonnaise, and Milk

CBD and Kratom are not the only products on the market that concern the FDA and FTC. Plant-based food options—and their advertising claims—are growing in popularity among health-conscious consumers who are interested in plant-based products due

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70 Schedules of Controlled Substances, 81 Fed. Reg. at 59,930.
71 Id., at 59,933; DRUG ENF’T ADMIN., DEA Announces Intent to Schedule Kratom, Press Release (August 30, 2016).
73 You can buy it in gas stations, but experts warn that the drug Kratom is unregulated and under-researched. MICH. RADIO NPR (July 17, 2019), https://michigan.drupal.publicbroadcasting.net/post/stateside-funding-roads-local-taxes-risks-kratom-mi-astronaut-apollo-11s-legacy.
74 Nick Wing, Feds Prepare for a New War on Kratom, an Herbal Drug Many Swear By, HUFFPOST (Nov. 14, 2017), https://www.huffpost.com/entry/fda-kratom-regulation_n_5a0b465be4b0a6e5e4e9e9d; FOOD AND DRUG ADMIN., Statement from FDA Commissioner Scott Gottlieb, M.D. on FDA advisory about deadly risks associated with kratom, Press Release (Nov. 14, 2017).
to their uneasiness with an overreliance on animal food products as a main source of protein. Consumers are also interested in more environmentally sustainable practices that use fewer resources, and plant-based product manufacturers proudly acknowledge this. Impossible Foods, Inc. (“Impossible Foods”) is one example of a company focused on “eliminating the need for animals in the food system.” To get there, the company has dedicated itself to “com up with a plant-based meat that people will actually choose.”

Food labels are also changing, and plant-based meat is a prime example of this. Changing food labels speak to consumers’ changing attitudes toward food and its ingredients, which are consistent with their interests in the self-care industry. Consumers are choosier about their ingredients as they search for “dairy free,” “gluten free,” “egg free,” “cruelty free,” “fat free,” “hormone free,” and similar labels. Consumers want to know what is and is not in their food, but not at the expense of quality and an authentic user experience. The growing number of “healthy” restaurant options and food brands demonstrate that consumers continue to care about what their food looks, smells, and tastes like. Consumers do not want to

76 Kelly, supra note 40 (quoting David Lipman, Impossible Foods’ Chief Science Officer).
77 Id.
ingest red meat, but they still want the experience of eating it. A recent example is the color additive petition that Impossible Foods filed and the FDA granted, allowing Impossible Foods to apply soy leghemoglobin—“plant blood”—to plant-based beef.\footnote{Listing of Color Additives Exempt From Certification; Soy Leghemoglobin, 84 Fed. Reg. 37,573, 37,573-74 (Aug. 1, 2019) (to be codified at 21 C.F.R. pt. 73) (explaining that Impossible Foods, Inc. filed and the FDA approved a color additive petition seeking permission for the FDA to consider soy leghemoglobin safe as a color additive, which would allow Impossible Foods to sell raw imitation beef in grocery stores); H. Claire Brown, After Plant Blood Gets FDA Approval, the Impossible Burger is Set to Hit Supermarket Shelves, THE NEW FOOD ECON. (July 31, 2019), https://newfoodeconomy.org/plant-blood-heme-fda-approval-impossible-burger/} Despite this, the FDA and the public are still very much concerned with the potential impact to human health that plant-based products may have.\footnote{Chase Purdy, Plant-Based Meats Sound Healthy, but They’re Still Processed Foods, QUARTZ (July 1, 2019), https://qz.com/1655309/beyond-meat-needs-to-com municate-how-it-makes-its-plant-based-burger; see Press Release, Scott Gottlieb, Food and Drug Admin. Comm’r, Statement from FDA Commissioner Scott Gottlieb, M.D., on modernizing standards of identity and the use of dairy names for plant-based substitutes (Sept. 27, 2018), https://www.fda.gov/news-events/press-announcements/statement-fda-commissioner-scott-gottlieb-md-modernizing-stand ards-identity-and-use-dairy-names.}

Despite market interest, the FDA, USDA, and various food industry stakeholders have expressed their concerns regarding the marketing claims surrounding alternative protein food options.\footnote{Beyond Meat Breaks Down After Consumer Group Warns of Chemicals in Fake Meat, CNBC (June 21, 2019, 5:37 PM), https://www.cnbc.com/video/2019/06/21/b eyond-meat-down-after-consumer-group-warns-of-chemicals-in-fake-meat.html?source=sharebar%7Ctwitter&par=sharebar (explaining via video one consumer groups concerns about the health claims from plant-based meat producers); see Lydia Mulvany & Deena Shanker, Why the ‘Bloody’ Impossible Burger Faces Another FDA Hurdle, BLOOMBERG (Dec. 26, 2018, 3:00 AM), https://www.bloomberg.com/news/articles/2018-12-26/why-the-bloody-impossible-burger-faces-another-fda-hurdle (discussing the concerns of interested parties about alternative meat producers’ lack of transparency when applying for FDA approval of “heme,” an additive in Impossible Foods’ plant-based meat).}

The various parties’ interests have culminated in a complex and sensitive regulatory and commercial framework that supports cell-based meat production: the FDA regulates cell collection and growth
during laboratory processing; the USDA manages the production and labeling of cell-based meat products developed from livestock and poultry cells; and food companies market the cell-based meat products for sale thereafter.84 One recent news article notes that, “[w]hile plant-based meat companies are ultimately making processed foods, their marketing is more in line with natural, organic offerings.”85 Indeed, more processing may not equate to being better-for-you, and in fact, some of these “meatless” products have come under attack in recent years due to alleged risks associated with the processing of their products.86 For example, a consumer advocacy group, “Moms Across America,” recently attacked Impossible Foods for allegedly high levels of the herbicide glyphosate in the burgers.87

The question present in these marketing efforts is whether advertising the very food that the product is replacing is misleading to consumers.88 A highly-processed food product by its nature is not grown in the earth, so does it really deserve the title “natural” or “healthy”? In this way, are consumers really getting the bargain for their buck with plant-based foods? In the “Just Mayo” case, the FDA voiced its concerns about misbranding involving Hampton Creek’s advertising mayonnaise with an image of an egg on the label when the product was egg-free.89 The issue was why an egg-free product

85 Purdy, supra note 82.
87 Mercola, supra note 86; see generally Impossible Foods, Inc., The Unofficial Correction of “Moms Across America” (May 18, 2019), https://assets.ctfassets.net/hhv516v5f7sj/77NQsg1qDb6d9Hi4PBQA6y/93b2af7c3f12ce4050e03af0345e7/Unofficial_Correction_Moms_Across_America_05202019.pdf (responding to the claims of Moms Across America).
has an egg on the picture of the label and whether this was confusing to consumers.\textsuperscript{90} Just Mayo subsequently relabeled its packaging by clarifying that the product was egg-free, and that the product packaging no longer displays an egg.\textsuperscript{91} Similarly, Muscle Milk revised its labeling to address allegations that arose in private litigation that its product was misbranded because it did not fit the standard of milk as consumers understood it, as it contained milk protein instead of cow’s milk.\textsuperscript{92} These cases demonstrate that consumers should think critically about the advertisements that they perceive related to certain self-care, plant-based products until the FDA determines the meaning of certain terms or decides whether to allow replacement products to advertise the very product that they are substituting.

VI. How Can Manufacturers, Consumers, and the U.S. Federal and State Governments Help?

A. Manufacturers

The lack of research, a growing self-care industry, consumers’ interest in self-treatment, and the rise of alternative therapies, including food and other ingestible ingredients, strongly suggest that the FDA has wide latitude to regulate in these spaces and should provide guidance to industry stakeholders and education and warnings to consumers. The FDA should also regulate in these food-drug hybrid spaces in the interest of consumers’ present and future health. So, what can industry stakeholders do to help ensure that neither legislative nor executive action creates precedent against their interests in this space?

Companies promoting novel products do not always follow the golden rule of advertising,\textsuperscript{93} especially in the e-commerce

\textsuperscript{90} "Just Mayo" Just Isn’t Warns FDA, FED’N OF AMERICAN SCIENTISTS, (Sept. 14, 2015, 1:10 PM), https://fas.org/sgp/crs/misc/mayo.pdf.


\textsuperscript{92} See generally Andrew Adam Newman, Got Milk? For Sports Drink Maker, Nestlé Says No, N.Y. TIMES (July 26, 2009), https://www.nytimes.com/2009/07/27/business/media/27adco.html, (giving a brief overview of the petition filed by Nestle in regards to the labeling of Muscle Milk); see also Muscle Milk Pro Series 40 Protein Shake, Go Bananas, 14 Oz, WALMART, https://www.walmart.com (search “Muscle Milk Pro Series 40 Protein Shake”) (showing the Muscle Milk label as now saying “CONTAINS NO MILK”).

\textsuperscript{93} Federal Trade Commission Act, 15 U.S.C. § 45 (2012) (stating in Section 5 that unfair or deceptive acts or practices in or affecting commerce are prohibited and stating in Section 12 that false advertising that is likely to induce the purchase of foods, drugs, devices, services, or cosmetics is also prohibited).
Sometimes marketers appear to forget that all advertising claims must be truthful, accurate, and not misleading or deceptive. They continue to push the envelope with even the most basic of claims and marketing tactics. Companies can help combat misleading marketing by not making un- or under-substantiated claims about their products; they can continue to manufacture their products according to current good manufacturing practices (“GMPs”); and they can err on the side of caution when making claims related to human health to avoid misleading consumers about products that various stakeholders (the self-help industry, the government, and consumers) across the country are still getting to know.

The food and beverage, drug, and cosmetics industries have a great opportunity to research the health impacts on the human body of the various alternative therapies and products hitting the market today, to present scientific-based research studies to the FDA and industry stakeholders to substantiate their claims and advertisements, and to advocate for the safest, most effective alternative therapies and products that emerge from their research. Well-researched health benefits are far more likely to lead to well-founded product claims and advertisements than a blank slate of regulatory fear and inaction. Hybrid food-drug products thus present enormous opportunity for industry stakeholders to play a role in not only changing law and policy, but also influencing consumers’ perspectives.

Novel consumer goods products present more risk of misleading consumers because they fall into areas of regulatory uncertainty. The FDA’s comfort zones are and have been food, drugs, and cosmetics, but, as hybrid products have emerged, the FDA grows weary of—and at times paralyzed over—how crossover products may interact with each other on the human body and in what amounts. If consumers do not know what a food or other consumable product is, how can they make an informed choice whether to purchase and ingest it? If the U.S. federal and state governments allow food and other consumable products to be marketed with names that are potentially misleading about what the product is, how can consumers know what is good for them?

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94 US. FOOD & DRUG ADMIN., VAPEJOOSE LETTER, supra note 56.
95 Id.
97 See id.
98 Presentation at the FDLI Annual Conference: Marijuana, CBD, and Hemp: Understanding the Current Regulatory Landscape and How it Might Change (May 3, 2019).
Plentiful options at grocery and convenience stores already daunt consumers. How much more daunting is grocery shopping when advertisements for CBD and other un- or under-regulated plant-based products line the aisles and counters with less-than-truthful claims enticing consumers to “try” a new product? What should consumers do amid the exploding self-care industry, rising healthcare costs, and unregulated claims pertaining to ingestible self-care products? These questions, of course, may not yet have an answer, but they are worth asking as technology drives consumers toward more food and related self-care options.

B. Consumers

Consumers must remain vigilant in their analysis. They should not stop reading labels, researching product manufacturers, and thinking critically about the print and digital advertising (1) on product packaging and labels and (2) on websites and in social media, respectively. The CBD, Kratom, and plant-based product debates present the lingering question of how much risk it will take to change the law. Will it take a child eating several CBD-infused gummies, or something more or less? Underregulated products like CBD and Kratom pose the risk of food fraud to consumers where the integrity of the product has not yet been proved. Ms. Fritz warns:

Anyone using CBD should make serious inquiries into the quality and purity of the product . . . Studies have shown that many of the CBD oils out there consist mostly of olive oil or another alternative oil besides true CBD. Therefore, consumers should question the quality of the products they elect to purchase and use.99

Consumers should be wary of the new ease of click-to-purchase transactions. They should continue to do their homework by consulting multiple reputable sources about such novel self-care products including food and food additives.

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99 Interview with Koral Fritz, Attorney, Innovative Law Group (July 15, 2019). Ms. Fritz is a licensed attorney practicing in West Michigan. Her current practice focuses on providing guidance to business clients on contracts, real estate, environmental, and litigation matters. Along with a law degree, she also earned her Master’s degree in Food and Agriculture Law and Policy from the Vermont Law School. Her experience ranges from working for national nonprofits on food policy to counseling clients retailing CBD and others interested in growing and marketing cannabis.
C. Government

While the FD&C Act widely covers the regulation of food, drugs, and cosmetics, the FDA has struggled for years with how to regulate hybrid products that straddle two or more of these categories. The best, most illustrative example of an opportunity for industry stakeholders to influence U.S. food and drug law currently rests with the debate over hemp and hemp-derived products since the Farm Bill of 2018. This area is ripe for stakeholder discussion and thought leadership because of manufacturers’ ability to create products that contain various parts of the plant at varying levels.

Examples are plentiful of manufacturers using CBD as an ingredient in their food products, dietary supplements, and drugs. Examples include CBD-infused gummies, dietary supplements containing CBD, topical creams and oils containing CBD, CBD-infused nasal sprays, CBD brownies and cookies, etc. The same is true with Kratom. Due to its powder-like form, Kratom can easily be added to other products. There is no better time to impact U.S. food and drug law than now with the rise of these spaces adjacent to typical food products and dietary supplements. The FDA is begging the industry to take charge with science-based evidence to demonstrate substantiated risks and benefits before the FDA will take a position on CBD, Kratom, and other plant-based ingredients in food products, dietary supplements, and consumer goods that dip into both worlds. As in the case of CBD, influencing U.S. food and drug law is not that difficult. The FDA comment process is all inclusive and inviting.

However, government indecision has contributed to marketplace and consumer confusion over CBD. Medical doctor Peter Grinspoon explains that “the government’s position on CBD is

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101 There are currently over 9,000 “Health & Household” items listed for sale on Amazon containing CBD. See AMAZON, https://www.amazon.com/ (type “CBD” in search bar; then narrow search results to “Health & Household” under “Department”) (last visited Nov. 10, 2019).
102 Id.
104 See U.S. FOOD & DRUG ADMIN., FDA REGULATION OF CANNABIS, supra note 43.
confusing, and depends in part on whether the CBD comes from hemp or marijuana.\textsuperscript{106} The wide disparity in how law firms and other legal and compliance professionals and stakeholders position information about the Farm Bills of 2014 and 2018 and their effect on hemp and CBD further demonstrates the likelihood for consumer confusion. Attorney Koral Fritz explains:

The recent popularity of CBD has forced the FDA to play catch up. As often happens, the market is ahead of the law . . . [T]he new supply and demand for these products has led to the FDA holding hearings with industry stakeholders to develop a regulatory framework for CBD . . . [M]onths ago[,] the FDA reiterated the clear position that CBD is not approved for use in food, however, the agency basically told the market that it will not be focusing on enforcement except for when a CBD product bares a health claim that goes too far. The FDA seems the most concerned currently with any CBD product making a qualified health claim. The FDA has taken enforcement action against companies that make unfounded, egregious claims about their products' ability to limit, treat, or cure cancer or diseases.\textsuperscript{107}

The FDA has made decisions on hemp seed, hemp oil, and hemp protein.\textsuperscript{108} However, the path forward for the cannabis and hemp industries depends on the USDA’s and the FDA’s ongoing efforts to issue guidance and rules for implementation of the 2018 Farm Bill.

Despite the need for FDA guidance with input from the industry on CBD, Kratom, and other emerging plant-based products, the FDA could also launch an education campaign to warn consumers about the dangers of ingesting these products that still lack research and regulation.\textsuperscript{109} While the FDA continues to


\textsuperscript{107} Interview with Koral Fritz, \textit{supra} note 99.


\textsuperscript{109} To the FDA’s credit, the FDA has issued several public statements about CBD, warning consumers about its potential effects and promising an industry update in the near future. See Abernethy & Schiller, \textit{supra} note 100.
determine the health risks involved with these types of products, FDA warnings and educational messages could help consumers think critically about these products before ingesting them. FDA public statements are helpful, but the FDA should more closely meet consumers where they are—in the marketplace—to help ensure that they understand the health risks of not only the plant-based food additives discussed in this paper, but also those yet to come.

VII. Conclusion

The self-care industry will not slow down to accommodate for regulatory concern, consumer confusion, or manufacturers’ perfection of their products or processes. The unknown or misunderstood lurking health risks associated with products containing un-regulated or under-regulated ingredients will require a village rather than a single government or consumer advocacy group to help shield consumers from deceptive advertisements. Where the marketplace has revealed consumers’ interests, it has also exposed the need for increased scrutiny from industry, the public, and government to help ensure that risks to human health are minimal as such self-care products come available for sale.

Industry influence is at an incredible high to shape the U.S. legal and regulatory framework for food and drug policy in the self-care space. The bright spot remains the industry’s opportunity to influence how the U.S. federal and state governments decide to regulate the products that entice consumers due to their potential therapeutic effects as well as consumers’ ability to experience managing their own health. The FDA and consumers are listening as well, and each party has a significant role to play. By each stating and justifying their interests and through their collaborative efforts, the three actors can help the U.S. expedite its journey towards increased government regulation that fits both the industry’s and consumers’ appetites for guidance while remaining flexible enough to allow for innovative self-care food products and food additives to develop for years to come.
Going Hemp Wild: Understanding the Challenges and Opportunities for FDA Regulation of CBD in Food Products

Hannah Catt*

Abstract

After the passage of the 2018 Farm Bill, champions of hemp began to tout opportunities for farmers and businesses involved with the crop. The industry has rallied around one of hemp’s major byproducts, cannabidiol, or CBD. However, the demand for CBD has left the Food and Drug Administration (“FDA”) playing catch-up. This article explains what CBD is, how it is derived, current FDA-approved uses, and a current path forward for the FDA in creating guidance for industry and consumers.

I. Introduction

It is difficult today to read the news, browse social media, or even shop in some stores without encountering people extolling the virtues of cannabidiol (“CBD”) or questioning its therapeutic value.¹ The Food and Drug Administration has been challenged by the proliferation of CBD in many markets. The hype has not escaped the FDA’s notice, but a federal agency is not poised to quickly respond to trends like these, therefore, the agency has yet to promulgate a full set of regulations.

The production and use of CBD involve competing interests, from the pharmaceutical sector, food producers, farmers, and consumers. Each of these parties has an interest in regulations being developed sooner rather than later, in part because there is currently significant market opportunity for CBD products. This article explores the following issues relating to CBD: what CBD is; how it is different from other cannabis products; what CBD is being used for; and how the federal government can appropriately regulate the production and use of the product. Due to the limited existing research on the effects of CBD, the best option may be for the FDA

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¹ Some companies that market CBD products are mentioned by name in this article. No mention of a specific company serves as an endorsement; it is purely for illustrative purposes.

to allow CBD to be sold as a supplement in limited concentrations while also working towards new drug approvals.

II. Hemp and Cannabinoids

In recent years, many states have legalized medicinal and/or recreational marijuana use.3 Recent legislation expanding programs for legal hemp production has increased interest in by-products of the plant beyond traditional, industrial uses.4 Despite the differences in the use and availability of marijuana and hemp, the two are inextricably linked, usually under the banner of “cannabis.” While confusing, this is not a mistake. Marijuana and hemp are both products of Cannabis sativa, however, they are distinguishable based on their relative concentration of tetrahydrocannabinol ("THC").5 The plants can also be distinguished by their physical features when growing, as explained in Section II.

Marijuana is often consumed for the psychoactive effects of THC, which is present in varying amounts based on the plant variety or cultivar.6 CBD is commonly considered non-psychoactive because it does not produce the “high” associated with consuming marijuana.7 In his work, prominent cannabis researcher Dr. Ernest Small has clarified that this common usage of the term non-psychoactive for describing CBD is not proper because any significant change in mental state, including anxiety changes, should be considered a psychoactive effect.8

CBD and THC are also both cannabinoids, a chemical component of the cannabis sativa plant.9 While cannabinoids have been found in other plants, CBD is noted as the “principal cannabinoid of hemp.”10 There have been over 100 cannabinoids identified in cannabis.11 The cannabinoids act by binding to

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6 Variety is technically used to note the plant types that are found in nature, while cultivars are bred for specific characteristics. Id. (citing Cindy Haynes, Cultivar Versus Variety, IOWA ST. UNIV. HORTICULTURE & HOME PEST NEWS (Feb. 6, 2008), https://hortnews.extension.iastate.edu/2008/2-6/CultivarOrVariety.html).
7 ERNEST SMALL, CANNABIS: A COMPLETE GUIDE 204 (2016).
8 Id.
9 Id. at 205.
10 Id.
receptors in the body’s endocannabinoid system. This system and the resulting effects of cannabinoids in the body were not discovered until the late twentieth century.\(^{13}\)

CB\(_1\) and CB\(_2\) are both found in the central nervous system and various organs throughout the body.\(^{14}\) Because of the relatively recent discovery of the endocannabinoid system and the many restrictions around research related to cannabis, a full understanding of the effects of cannabinoids is still developing. The different receptor locations where the binding takes place can impact the ultimate effects of cannabis consumption, the potency of the product, and how CBD and THC will impact the body.\(^{15}\)

An additional area of study is how different cannabinoids work together. Those involved in the illicit trade or consumption of marijuana are seeking out a higher THC content, which will increase the psychoactive effects. New strains of cannabis have been bred to have a higher THC content at the expense of the CBD content. In the reverse, cannabis bred for fiber or oilseed has high CBD content and minimal THC.\(^{16}\) Further, manufacturers of marijuana edibles do not currently have an incentive to add CBD to the final product.\(^{17}\) This may change as more is discovered about the combined effects of THC and CBD, referred to as “entourage” or “ensemble” effects.\(^{18}\) Consumption of THC and CBD has been shown to lessen some of the psychoactive symptoms of THC.\(^{19}\) The reason for this is not immediately clear, but researchers have noticed this in patients who take approved drugs with THC, such as Marinol, an appetite stimulant primarily prescribed for patients with AIDS.\(^{20}\)

CBD is produced through an extraction process which should be highly monitored to ensure there is no THC present. To

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14 Id.
15 SMALL, supra note 7, at 304–06.
16 Id. at 208.
17 Simon, supra note 13.
18 Some researchers prefer the term “ensemble effect” because it does not suggest that THC is the most important cannabinoid for the endocannabinoid system response. Simon, supra note 13.
20 Simon, supra note 13; Pácher, et al., supra note 12, at Table 1 (reporting that patients taking Marinol experienced improvement in the areas of “spasticity, pain, and sleep quality” and “was found to suppress otherwise intractable cholestatic pruritus in a case report”).
extract the CBD, hemp plants are harvested and then left to cure for
a few weeks. The flower of the plant is then removed and sent to a
processor. The processor grinds the flowers, then steeps them to
remove some terpenoids. After a cold treatment, it is distilled,
sometimes twice, to achieve the right color and purity. Many
brands have their products tested to guarantee purity and low or no
THC content.

III. Examining Hemp Production

The revenue that states and businesses have generated from
selling recreational marijuana is frequently labeled as a “Green
Rush.” The value of the CBD market could be a second wave in
this rush because it is worth around half a billion dollars today and
has the potential to reach twenty billion dollars by 2020. However,
hemp has a long history of use for other industrial purposes and has
proven to be a versatile crop. Hemp uses less inputs than a more
traditional crop like corn. Once out of the initial development time,
producers use less water, pesticides, and fertilizers. The terpenoids

21 Eric Hurlock, Harvesting, Drying, Trimming, & Curing Industrial Hemp Flower, LANCASTER FARMING (Sep. 3, 2019), https://www.lancasterfarming.com (search article name) (discussing measures a farm takes to monitor CBD and THC levels in hemp flowers prior to harvest); Rajul Punjabi, There’s CBD in Everything so We Found Out How It’s Made, VICE (Oct. 23, 2018), http://www.vice.com/en_us/article/wj9knbi/visit-a-cannabis-farm-to-find-out-how-cbd-oil-is-made.
22 Punjabi, supra note 21.
23 Id.
24 Id.
25 Medterra is an example of this. This company sources all of its hemp from products grown as a part of the Kentucky Department of Agriculture Pilot Program. Frequently Asked Questions, MEDTERRA, https://medterracebd.com/faq (last visited Nov. 9, 2019) (linking interested consumers to the third-party lab test results of the company’s CBD products).
30 Id.
that give cannabis its unique smell have also been found in other plants as a method of insect deterrent.\textsuperscript{31} Hemp plants grow tall, occasionally up to sixteen feet.\textsuperscript{32} Plant height is one way to easily distinguish hemp from marijuana, with the latter usually being short and stubby.\textsuperscript{33}

Once harvested, hemp can be made into almost 25,000 different products in categories including: textiles, automotive parts, food and beverages, and personal care products.\textsuperscript{34} Most of the hemp going into these products had to be imported though, due to restrictions on growing hemp.\textsuperscript{35} China accounts for the largest share of production, growing roughly one-fifth of the world supply and importing the most to the United States ("U.S.").\textsuperscript{36} Hemp fiber and seeds can have returns of up to $700 per acre or $1,200 per acre, respectively.\textsuperscript{37} The total market value is approaching one billion dollars.\textsuperscript{38} The opportunity to grow hemp for use in American industry and processing is an attractive one, and it presents a valuable market opportunity for potential hemp farmers.\textsuperscript{39} The history of hemp production shows that there are many uses for the crop beyond focusing exclusively on CBD. The CBD market could collapse at any time or be severely restricted if the FDA takes a more aggressive stance on non-prescribed uses of the compound.

China has historically produced large volumes of hemp, and evidence suggests that they have been growing it for anywhere from six to ten thousand years.\textsuperscript{40} Hemp was spread from China to Western Asia and Egypt, and then to Europe.\textsuperscript{41} The crop did not arrive in North America until the seventeenth century.\textsuperscript{42} From approximately that time until the nineteenth century, hemp was at its peak, being used for textiles, paper, and even sails for ships.\textsuperscript{43} Many reasons are suggested for its decline in popularity, including the labor involved

\begin{itemize}
\item \textsuperscript{31} Russo, \textit{supra} note 19, at 349.
\item \textsuperscript{33} \textit{Id}.
\item \textsuperscript{34} \textit{Id}.
\item \textsuperscript{35} \textit{Id}.
\item \textsuperscript{36} \textit{Id}.
\item \textsuperscript{37} CONG. RES. SERV., \textit{supra} note 5, at 8.
\item \textsuperscript{39} Comparing it to grain, Brian Barth asserts that fifty acres should be a minimum for growing hemp to retain profitability. Barth, \textit{supra} note 29.
\item \textsuperscript{40} SMALL, \textit{supra} note 7, at 91.
\item \textsuperscript{41} \textit{Id} at 92.
\item \textsuperscript{42} \textit{Id}.
\item \textsuperscript{43} \textit{Id} at 93–94.
\end{itemize}
with cultivation, cheaper fibers becoming available during the Industrial Revolution, and the decreased use of sailing ships in favor of fuel-powered ships.  

Until the 2014 Farm Bill hemp provisions, hemp was regulated along with marijuana. Hemp was listed as a Schedule I substance under the Controlled Substances Act (“CSA”), and the Drug Enforcement Administration (“DEA”) provided oversight. This classification required anyone who wanted to grow hemp to get approval from the DEA, but applications were usually not approved. One early university research plot was approved in North Dakota, but it involved significant costs. Similar to states choosing to allow recreational marijuana consumption while it is restricted federally, states could create their own policies to allow hemp cultivation if a DEA license was granted.

Hemp provisions found in the 2014 Farm Bill created an agricultural pilot program “to study the growth, cultivation, or marketing of industrial hemp.” While states are allowed to create their own regulations for programs, growing sites have to be registered with and certified by the state’s department of agriculture, and the growing is limited to research purposes of agriculture departments or colleges and universities. “Industrial hemp” is defined as cannabis sativa with less than 0.3% THC on a dry weight basis. This figure is widely used to distinguish hemp from marijuana. The THC amount was proposed by Ernest Small, who indicated that, at 1% THC presence, marijuana begins to have “intoxicating potential.” In addition to the U.S., Canada and portions of Europe and Australia use the same threshold. Small is quick to note this is a low threshold but contends that this makes it

44 Id. at 94.
45 CONG. RES. SERV., supra note 5, at 3–4.
46 21 U.S.C § 812 (b)(1) (2018) (providing that Schedule I substances have “a high potential for abuse,” “no currently accepted medical use in treatment in the United States,” and a “lack of accepted safety for use of the drug or other substance under medical supervision.”)
47 Christine A. Kolosov, Evaluating the Public Interest: Regulation of Industrial Hemp Under the Controlled Substances Act, 57 UCLA L. REV. 237, 247 (2009) (providing an overview of the legal status of hemp cultivation over time in the U.S. and explaining how state programs to allow cultivation are limited by DEA approval).
48 Id.
50 Id. § 5940(A)–(B).
51 Id.
52 SMALL, supra note 7, at 208.
53 Id.
highly unlikely that hemp would be repurposed for illegal consumption.54

The 2018 Farm Bill loosened the restrictions on hemp further, officially removing it from the federal schedule of controlled substances.55 Because it was removed from the schedule, the DEA also cannot interfere with the passage of hemp across state lines.56 Growers still have to operate under a state pilot program, of which there are currently forty-one.57

Kentucky was an early leader in the U.S. hemp market after pilot program rules were released in the 2014 Farm Bill. State law requires producers, handlers, processors, and marketers to obtain a license from the Kentucky Department of Agriculture.58 Violation of the licensing requirements is penalized by the same provisions for violations of state rules relating to marijuana.59 These penalties are found in state statutes for controlled substances.60 The state publishes a list of licensees, which can help facilitate the market for hemp.61 There are over one hundred processors and handlers licensed, and, in 2018, farmers were paid over $17 million for hemp, and over $50 million of gross products were sold.62 The acreage in use is also rapidly increasing, approaching 10,000 acres.63 Kentucky Commissioner of Agriculture Ryan Quarles has noted that these

54 Id.
56 Id.
60 KY. REV. STAT. ANN. § 218A.140 (West 2011).
63 Id.
figures represent a small portion of the state’s total agricultural production, but the program’s goal was to ensure that Kentucky could gain a lead on the market when it became legal to start production and interstate transport.64

The hemp provisions found in the 2018 Farm Bill have not yet been enacted by the United States Department of Agriculture (“USDA”). Until enacted, the market needs to operate under the rules from the 2014 bill. Growers have major questions about crop insurance, organic certification, interstate transportation, and banking access.65 Secretary of Agriculture Sonny Perdue estimated that there will not be rules in time for this season, but they will be ready for 2020 planting.66 Growers are also having trouble getting access to seeds to purchase, because they may have to be imported, and growers need to ensure they have varieties with THC levels below the legal threshold.67

Due to the natural resilience of hemp, it is well-suited to organic growing methods.68 The USDA, which oversees the National Organic Program, has allowed organic certification for hemp, but not marijuana.69 Allowing organic certification for hemp byproducts like CBD could be beneficial, particularly if it is being utilized as an ingredient in pharmaceuticals. Organic textiles are also specially marketed, often for clothing.70 Kentucky is home to the Kentucky Organic Hemp Cooperative, one of the country’s first, which has brought together farmers with smaller-than-usual acreage who want to get market access.71 Many of these farmers are growing on land that has not recently been used for conventional crops, so they do not have to wait through the three-year transitional period that conventional farms need for organic certification.72 Most of

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64 Id.
67 Howard, supra note 57.
69 Barth, supra at note 29.
72 Id.
them are also growing hemp that will have CBD extracted because as much as seventy percent of the state’s hemp is sold to the CBD market. 73

IV. Current FDA Stance

A. Food, Drug, and Cosmetic Act Rules

At its core, the primary concern with the regulation of CBD products is about consumer safety. The FDA does not want the public taking products that have not been tested for purity or because a company has made a wild claim about CBD’s ability to cure an ailment.74 Concerns about the safety of food and drugs have existed since time immemorial, but the first major U.S. legislation on the subject was the 1906 Food and Drugs Act, passed by President Theodore Roosevelt.75 This Act cracked down on adulterated and misbranded food and drugs.76 The enactment was motivated by problems in the industry, including a 1902 tragedy in St. Louis, when thirteen children died after taking a contaminated drug.77 The children were administered a diphtheria antitoxin, but it was contaminated with tetanus spores.78

The Act was updated under the administration of President Franklin Roosevelt, with the 1938 Federal Food, Drug, and Cosmetic Act (“FDCA”).79 Although the FDCA has been amended since its inception, it remains the key starting point for understanding food and drug regulation.

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73 Id.
74 WHAT YOU NEED TO KNOW (AND WHAT WE’RE WORKING TO FIND OUT) ABOUT PRODUCTS CONTAINING CANNABIS OR CANNABIS-DERIVED COMPOUNDS, INCLUDING CBD, U.S. FOOD & DRUG ADMIN. (July 17, 2019), https://www.fda.gov/consumers/consumer-updates/what-you-need-know-and-what-were-working-find-out-about-products-containing-cannabis-or-cannabis.
The FDCA defines drugs as “articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals and articles (other than food) intended to affect the structure or any function of the body of man or other animals.” 80 Before any drug can be sold, manufacturers submit an application to the FDA Center for Drug Evaluation and Research (CDER). 81 New products are submitted under a new drug application; however, there are many other types of approval processes, including for investigational new drugs, therapeutic biologics, and over-the-counter drugs. 82 All of this application information will help the FDA make a decision about approved doses, potential interactions with other drugs, side effects that require warnings, and whether a drug can be used continuously. 83

Although the 2018 Farm Bill removed hemp from DEA oversight, it did not modify the FDA’s authority on cannabis products or compounds. 84 Cannabis remains a Schedule I drug according to the DEA, indicating no accepted medical use. 85 However, the FDA has approved one cannabis-derived drug and three “cannabis-related” drugs. 86 The only approved drug with CBD as an active ingredient is Epidiolex, and it was approved to treat seizures in children suffering from Lennox-Gastaut or Dravet syndrome. 87 The cannabis-derived drugs rely on synthetic THC, either dronabinol or nabilone. The drugs are Marinol, Syndros, and Cesamet. 88 The first two have been useful in combatting appetite loss in AIDS patients. 89 Cesamet was approved for chemotherapy patients to reduce nausea and vomiting from the treatment. 90

82 Id.
83 Id.
85 Id.
86 Id.
87 Id.
88 Id.
89 Id.
The trial conducted for epilepsy, which led to the approval of Epidiolex, was supported by the drug manufacturer GW Pharmaceuticals.\(^91\) This presents a challenge for drug development—large pharmaceutical companies have significant resources to pour into research and development, go through the lengthy administrative process to get a drug approved by the FDA, and conduct testing to ensure they have a pure and safe product. Once hemp research is less restricted, it is possible that these large companies may try to get in on the market for legal drugs first, capturing most of the revenue. However, an increase in the number of approved hemp-derived drugs could create a stable market for farmers.\(^92\)

The FDA approval of CBD as an active ingredient in Epidiolex was a victory for the patients it will help. The market for CBD supplements and food products was hindered, however, because of FDCA rules which restrict the use of active ingredients in FDA-approved drugs for food and dietary supplements. A dietary supplement can contain an herb or botanical, but because it is an active ingredient in a drug, CBD cannot be marketed as a dietary supplement.\(^93\) The FDA does have the discretion to go through the notice and comment process to create a regulation allowing the sale of dietary supplements with an approved-drug active ingredient.\(^94\) However, the FDA has not chosen to exercise that discretion at this time.\(^95\)

The same restriction outlaws the introduction of CBD-containing products into interstate commerce. Section 331 of the FDCA prohibits “[t]he introduction or delivery for introduction into interstate commerce of any food to which has been added a drug approved under section 355 of this title.”\(^96\) Similar to the rules on supplements, the FDA Secretary can use his discretion to issue a regulation that allows the use of the drug in food.\(^97\) There are already

\(^{91}\) Orrin Devinsky et. al., \emph{Trial of Cannabidiol for Drug-Resistant Seizures in Dravet Syndrome}, 376 NEW ENG. J. MED. 2011, 2012 (2017).
\(^{94}\) U.S. FOOD & DRUG ADMIN., \emph{REGULATION OF CANNABIS}, supra note 84.
\(^{95}\) Id.
\(^{96}\) Id.
foods derived from hemp, and some, like hempseed, are easy to find.98

The interest in CBD for food products is not limited to humans, either. Martha Stewart has formed a partnership with the Canadian company “Canopy Growth” to launch a line of pet products with CBD.99 Another celebrity getting in on the market is rock star Gene Simmons, who recently announced a CBD soda.100 There are many other edible products, topical products, and cosmetics that are available, creating a lot of work for anyone attempting to enforce the FDCA provisions, whether by preventing products from being shipped in interstate commerce or completely stopping their sale.101

An additional and interesting component of the market for CBD products is how they move in commerce, either inter- or intrastate. Earlier this year, the U.S. Postal Service (USPS) issued an advisory about the mailing of CBD products.102 Specifying that these rules are temporary until the 2018 Farm Bill can be fully implemented, the USPS is allowing shipment of CBD products under certain circumstances.103 In connection with the permitted research production of hemp, mailers have to sign a statement certifying that they have a valid license from the state department of agriculture in the mail piece’s originating state.104

99 Thomas Franck & Angela LaVito, Martha Stewart Partnering with Marijuana Grocer Canopy Growth to Develop Hemp-Derived Products, CNBC (Feb. 28, 2019, 6:36 PM), https://www.cnbc.com/2019/02/28/martha-stewart-to-join-marijuana-grower-canopy-growth.html. The regulation of pet food and the potential implications for CBD is a topic deserving of its own article, particularly because of the potential, diverse side effects various animal species could have to CBD. See generally Consumer Reports, CBD for Pets’ Ailments? Many People Swear By it, But There’s Very Little Animal Research., THE WASHINGTON POST (Feb. 18, 2019, 1:00 PM), https://www.washingtonpost.com (search “CBD for pets ailments” and select the first result).
103 Id.
104 Id.
The FDA has been proactive in releasing information about CBD and ensuring that the public can find and understand the agency’s position. However, the momentum was stalled when FDA Commissioner Scott Gottlieb announced in March that he would be stepping down from his post in April. Gottlieb surprised many people with his progressive work during his two years at the agency, and he commented frequently on CBD in particular. Because of the limits of agency rulemaking, he suggested that Congress make rules for the use of CBD in food products, because Congress could act more quickly. Gottlieb has since left the FDA, but the agency moved ahead with a public hearing on May 31, 2019, with the purpose to “obtain scientific data and information about the safety, manufacturing, product quality, marketing, labeling, and sale of products containing cannabis or cannabis-derived compounds.”

At the hearing, presentations were made on topics ranging from prescription interactions with cannabidiol to the use of hemp-derived ingredients in animal feed. There were representatives from consumer groups, state departments of agriculture, and academia, among others. The breadth of representation is a good indication of the interest in creating regulations for cannabinoids and creating a path for researchers to understand them. In a letter addressed to Ned Sharpless, the acting commissioner of the FDA after Gottlieb’s departure, a bipartisan group of Congressional

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109 See id. (listing the various representatives present at the FDA public hearing on cannabis or cannabis-derived products, including those from consumer groups, state departments of agriculture, academia, health professions, manufactures, and other interested parties).
representatives addressed the issue of CBD in food products. They specifically proposed that the agency create an interim final rule for the use of CBD in food products and dietary supplements in addition to creating enforcement guidance and standards evaluating the safety and accuracy of labeling.

The agency rulemaking process has many layers and can seem quite complex, but every step is designed to ensure interested parties can make their voice heard and that the agency can gather appropriate technical information before promulgating a new rule. Agencies publish a proposed rule or Notice of Proposed Rulemaking (“NPRM”) in the Federal Register. Comment periods are typically thirty to sixty days, but can be longer if the rule is particularly complicated. The upcoming public meeting on CBD will allow people to share comments and information with the FDA, and the agency is also taking written comments. A final rule should be based on the entire rulemaking record, including these public comments.

Former Commissioner Gottlieb expanded on the potential of rulemaking for CBD in an interview with the Brookings Institution in March. He stated that a standard rule takes “two to three years,” and that he didn’t believe he could have accomplished rule formation during his tenure, nor will the person who succeeds him. Gottlieb considers a rule for CBD in food to be novel and complex, because it has already been used in a drug and was not previously approved for use in food. He also described the imminent creation of a workgroup that would consider methods for Congress to create a legal route, noting that this was done for human growth hormone and fish oil.

The FDA has less control over dietary supplements than it does over prescription drugs. Premarket approval or notification to the FDA is limited, and the labeling rules are more expansive than

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111 Id. at 2.
113 Id.
115 Id.
116 Id.
117 Id.
those for prescription drugs.\textsuperscript{118} Presently, there are companies that market CBD and label it as supplements.\textsuperscript{119} Medterra, the company that sources hemp from Kentucky, labels its products as supplements.\textsuperscript{120} The company does list a disclaimer at the bottom of every web page that reads: “[r]epresentations regarding the efficacy and safety of Medterra have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, prevent, treat, or cure any disease.”\textsuperscript{121} This has not stopped many reviews from extolling the uses of the product for joint paint, anxiety, hearing loss, and other issues.\textsuperscript{122} The company ships to every state in the U.S. and internationally.

Other companies advertising CBD supplements are easy to find. The FDA has issued warning letters to numerous companies, most of them for making unsubstantiated therapeutic claims about the products for sale.\textsuperscript{123} Warning letters give businesses time to take corrective action before more serious consequences are imposed, including product seizures or injunctions to halt the sale of items.\textsuperscript{124}

At the local and state level, health departments are cutting into the sales of CBD in food. The Los Angeles County Health Department issued its own guidance for restaurants, noting that beginning in July 2019, points would be deducted on inspections for selling food products adulterated with CBD.\textsuperscript{125} One reason that health officials are concerned is their belief that it can be difficult for customers to differentiate products with and without CBD and the

\textsuperscript{118} Rahi Azizi, “
\textsuperscript{119} CBD Oil – How Do You Successfully Market Products With No Standards?\textsuperscript{120} MEDTERRA CBD, https://medterracbd.com/category-wellness (last visited Nov. 8, 2019).
\textsuperscript{121} MEDTERRA CBD, https://medterracbd.com/reviews (last visited Nov. 7, 2019).
\textsuperscript{122} See MEDTERRA CBD, https://medterracbd.com/reviews (last visited Nov. 7, 2019).
relative dosage in each product.\textsuperscript{126} Acting under rules created for the state’s medical marijuana program, officials from the Ohio Department of Agriculture, Health Departments, and Policy have visited stores and instructed them to stop selling CBD products or risk having them seized.\textsuperscript{127} The state’s law prohibits the sale of CBD except in a licensed dispensary.\textsuperscript{128}

Despite the de-scheduling of hemp, there can still be a stigma associated with the consumption of hemp products. Consumers of untested products also run the risk of testing positively for THC if they are drug-tested, which can lead to serious consequences, especially for work-related drug testing.\textsuperscript{129} Some evidence shows that consuming large amounts of CBD can yield a false positive.\textsuperscript{130} One expert in cannabis testing has clarified that most drug tests are designed for finding THC, not other cannabinoids.\textsuperscript{131} This is an extremely discrete issue related to CBD consumption, so most people would be better off locating information related to their specific situation rather than relying on anecdotal information online.

V. Why should the FDA make rules for CBD?

The CBD market is not slowing down, and full implementation of the 2018 Farm Bill is likely to expand it. The FDA needs to make rules for consumer safety and to allow the regulated creation of new drugs. The FDA can create rules for testing products, creating a guarantee that a product is CBD, verifying the levels of THC, and confirming product purity.\textsuperscript{132} Access to quality CBD products will also assist researchers, who can conduct approved trials for new drugs and therapies that use CBD. Researchers at


\textsuperscript{128} Id.

\textsuperscript{129} Mike Adams, \textit{Marijuana Madness: This is How CBD Oil Can Cause a Failed Drug Test}, \textsc{Forbes} (Oct. 18, 2018, 3:38 PM), https://www.forbes.com (search “Mike Adams Marijuana Madness”).

\textsuperscript{130} Id.


\textsuperscript{132} Helena Bottemiller Evich, \textit{Gottlieb Suggests ‘Alternative Approaches’ for CBD to Discuss in Congress}, \textsc{Politico}, (Feb. 26, 2019, 1:34 PM), https://politico.pro.com (search “Gottlieb suggests alternative”).
Johns Hopkins University are planning a clinical trial that will test the potential benefits of CBD for smoking cessation.\textsuperscript{133}

Many potential benefits have been advertised, but not as much focus has been put on the side effects. The listed side effects of Epidiolex can include: decreased appetite, diarrhea, rashes, and lower sleep quality.\textsuperscript{134} Consumers also need guidance on dosing and the variety of ingestion methods that could change the effectiveness of a CBD drug. Research into CBD could also yield information about other cannabinoids and a new understanding of the ensemble effect in cannabinoids.

It is possible for research to be conducted with synthetic cannabinoids.\textsuperscript{135} The FDA-approved, cannabis-related drugs rely on synthetic cannabinoids.\textsuperscript{136} More recently, yeast has been used to produce synthetic THC and CBD.\textsuperscript{137} The obvious benefits are for companies that want to begin research without cultivating hemp and also ensure that the CBD is uncontaminated by THC. There is also an opportunity to produce other synthetic cannabinoids and begin to understand how many there actually are, potentially with more benefits than what we are already aware of.\textsuperscript{138} If synthetic CBD were marketed, though, regulators would do right by consumers by requiring a new name for the synthetic chemical, or a clear label that indicates it is not a naturally-derived product.

\textbf{VI. How should CBD be treated?}

Regulators have many options for designing CBD rules. The most formal process, and what would allow the most public input, would be agency rulemaking. However, the agency could, through rulemaking, use its discretion to allow the use of CBD in food products and supplements, despite it not being used in either of these products prior to the approval of Epidiolex. It also seems likely that


\textsuperscript{135} See e.g., Devinsky et al., \textit{supra} note 91, at 2011 (noting the research trials conducted before Epidiolex was FDA-approved).

\textsuperscript{136} See U.S. \textsc{Food & Drug Admin.}, \textit{Regulation of Cannabis}, \textit{supra} note 84 (discussing approved medical products).

\textsuperscript{137} Matt Simon, \textit{Forget Growing Weed – Make Yeast Spit Out CBD and THC Instead}, WIRED (Feb. 27, 2019, 1:00 PM), https://www.wired.com/story/yeast-cbd-and-the/.

\textsuperscript{138} \textit{Id.}
there will be more research on the therapeutic value of CBD, so Epidiolex will not be the only drug on the market for very long.

In addition to his comments supporting Congressional action on the regulation, Gottlieb envisioned it as a tier or schedule of concentrations for different products containing CBD, in part because the side effects at different concentrations are not yet studied and understood. Congress could authorize the use in food and supplements and then direct the FDA to establish the acceptable thresholds for each product. The collaboration between Congress and the agency is not uncommon and would be the fastest way to reach at least a temporary resolution until the FDA can solidify rules. Gottlieb also believes that the committee will have recommendations by the summer, which would be prior to the full 2018 Farm Bill implementation. If producers of CBD products have a better idea of their legality, it will also give farmers some clarity on the market for hemp.

VII. Conclusion

CBD has captured the interest of many different groups and created a headache for federal and state agencies. This is an exciting product, simply because of its untapped potential. It is, of course, added to the long list of useful hemp products, providing farmers with a new way to use their crops. The FDA and Congress should work together to create rules that allow food and drug producers to each have a piece of the market and provide consumers with tools for health and overall wellness.

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139 Interview with Scott Gottlieb, supra note 114.
140 Id.; see also Evich, supra note 132.
141 Interview with Scott Gottlieb, supra note 114.
Agricultural Exceptionalism and Industrial Animal Food Production: Exploring the Human Rights Nexus*

Charlotte E. Blattner** & Odile Ammann***

Abstract

The host of negative effects of animal agriculture on the immediate environment, workers, and local communities are well-documented, yet little is known about the global repercussions of animal agriculture, especially on human rights guarantees. This contribution attempts to begin filling this soaring gap. It examines the nexus between industrial animal agriculture (with a focus on concentrated animal feeding operations (CAFOs)) on the one hand, and specific international human rights violations on the other hand. Our emphasis is on the role of government in producing these violations, rather than on the agribusiness itself. Laws originally designed to govern small family farms—so-called “farmers’ rights” laws, including right-to-farm laws and exemptions from environmental and animal law—now protect corporate giants, many of which are multinationals. Governments enacting and upholding farmers’ rights shield agribusiness activities that are damaging to the environment and humans’ livelihoods from regulation. While they are prima facie at liberty to do so under domestic law, their laws are subject to the scrutiny of international law, particularly the human rights regime that promises to put a halt to the ongoing insulation of animal agriculture. The human rights perspective adds valuable dynamics to the ongoing debate, is novel in application to the issue, and opens new pathways for academic inquiries and legal strategies because—unlike nuisance laws, environmental laws, and animal protection laws, which de facto exempt the issue from judicial scrutiny—these laws can be used to hold governments accountable. The human rights discourse also gives rise to community empowerment and innovative forms of advocacy and forges connections between the different social justice issues implicated in

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animal agriculture. Finally, we show how scholars, researchers, stakeholders, and the public concerned about human rights issues can bring animal agriculture into the conversation and prompt their governments to address the issue proactively.

**Key words:** Animal Agriculture, Human Rights, Right to Food, Right to Water, Right to a Safe Environment, Right to Land, Farming, Food Security, Animal Protection, Food Sovereignty, CAFO

### I. North Carolina, the Front Line

Violet Branch, seventy-one, is one of innumerable residents of North Carolina that have an acrid odor of rotting eggs fill their homes at least twice per week, causing them nausea and heavy vomiting.\(^1\) Branch flees to the nearby supermarket, where she “paces the aisles until her breathing returns to normal.”\(^2\) The odor is a toxic slurry that comes from nearby factory farms, known as CAFOs,\(^3\) that confine animals by the thousands, spray manure over nearby fields and houses, and store it in uncovered cesspools. In North Carolina alone, about nine million pigs are raised on 2,300 factories, producing ten billion pounds of wet animal waste per year.\(^4\) Research shows that the fecal bacteria finds its way into open water, ground water, the air, and homes, and causes hepatitis, typhoid, dysentery, and other diseases.\(^5\) Long-term health hazards include higher risks of cancer and spontaneous abortions.\(^6\) Along with Branch, over five hundred plaintiffs brought a total of twenty-six suits against Murphy Brown, a subsidiary of Smithfield Foods, for degrading their quality of life and reducing the value of their property.\(^7\) The smell drove away their customers; cookouts, playing

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2. *Id.*
3. In the US, the Environmental Protection Agency (EPA) classifies concentrated animal feeding operations into CAFOs and AFOs (under the NPDES Program). AFO is a “medium-sized” CAFO with 200-699 dairy cows, 750-2,499 pigs, 9,000-29,000 laying hens, or 37,500 to 124,999 chickens. 40 C.F.R. § 122.23(b)(6) (2019). Anything beyond that is considered a CAFO. 40 C.F.R. § 122.23(b)(4) (2019).
in the yard, or just sitting on the porch became impossible; they could not have friends over anymore; feces collected on their houses and cars; swarms of flies followed them; and their children were teased at school.\footnote{Id.} In this place where “the smell of excrement seeps into all aspects of routine life,”\footnote{Schlanger, supra note 4.} people are “held prisoners in their own home.”\footnote{Kuo, supra note 1.}

In spring 2018, juries awarded plaintiffs in five cases a total of $574 million.\footnote{Id.} This is the first success for North Carolina communities in a twenty-five-year series of public concern, outrage, and sheer helplessness. Twenty-one of the twenty-six cases are still outstanding—opening a window for an alternative future.\footnote{Id.} Yet, the horrors people living near factory farms incur do not seem to bother North Carolina lawmakers, who just passed new legal protections for the companies, restricting suits over pollution, odor, and other “nuisance” claims.\footnote{Will Doran, After Smithfield Lost Millions in Lawsuits, NC Changed A Law. Was It Constitutional?, THE COURIER-TRIBUNE (June 21, 2019), https://www.courier-tribune.com/news/20190621/after-smithfield-lost-millions-in-lawsuits-nc-changed-law-was-it-constitutional.} Following North Carolina, legislators in Utah, Nebraska, Georgia, West Virginia, and Oklahoma have proposed and, in some cases, passed legislation that will make similar lawsuits impossible.\footnote{Id.} Republican Representatives Jimmy Dixon of Duplin County, John Bell of Wayne County, and Tim Moore of Cleveland County, the House speaker, issued a statement saying they “will continue to fight for hardworking North Carolina farm families and their communities by opposing any coordinated legal assault that seeks to profit off their livelihoods and potentially shut down their farms. . . . There is no right more fundamental than the right to feed our families.”\footnote{Id.} The spokesman for the North Carolina Pork Council, Robert Brown, said that the lawsuits are just “another effort by fringe groups” that lacks merit and that “farms and farmers take seriously the obligation to feed people in a responsible way that protects our communities.”\footnote{Id.}
What responsibility means in these circles is as little discussed as the fact that the “hardworking North Carolina farm families” are in fact a single $15 billion corporation. Another fact kept under wraps by the industry is that black residents are 1.54 times as likely to be affected by industrial pork operations than white residents, American Indian residents 2.18 times as likely, and Hispanic residents 1.39 times as likely. Though Smithfield pledged in 2000 to spend $17 million to research waste alternatives, “environmentally superior technologies” were never adopted, for the simple reason that they were “too costly.” In a place where pigs outnumber humans thirty-two to one, the real concern of corporate giants is their benefits of keeping the pork as low as $2.50 per pound, rather than the detriments to the community, animals, or the environment.

With democratic processes and the law now being blocked, communities are turning to extra-legal measures. In May 2019, the documentary Right to Harm was released, shining light on how people live (and die) for their battles for health, quality of life, and a safe environment. However, with climate change proceeding at an astounding rate and extreme weather becoming more frequent, North Carolina’s happy years of ignorance and denial are numbered. Hurricanes Floyd (in 1999), Matthew (in 2016), and Florence (in 2018) hit North Carolina with storms, floods, and feces that haunted the area for the past twenty-five years and washed ashore the many human and animal bodies that fall victim to the industry on a daily basis.

The topic brings to the fore a host of ethical, socio-political, and economic issues that, as we argue, are not germane to North Carolina’s ‘happy years of ignorance and denial’.

17 Id.


19 Kuo, supra note 1.

20 Id.


Carolina, but that plague the world as a whole. Research has shown the effects of animal agriculture on the environment, local communities, and workers’ rights, but we have yet to uncover how the growth and intensification of animal production have begun to threaten and violate human rights more broadly, indirectly, and pervasively. So while the most direct and short-term impacts of agriculture are now well-documented, its long-term impacts and effects on environments and communities more distant are still underexplored. Moreover, the North Carolina experience of nuisance lawsuits and efforts to block them is part of a much larger, worldwide topography in which animal agriculture enjoys quasi-immunity from the law.

In this paper, we analyze factory farming in connection with the laws protecting these businesses under international human rights law, a dimension yet unexamined by legal scholarship and largely unaddressed in public and parliamentary deliberations. We show how animal agriculture—and with it, the laws that insulate it—compromise human rights guarantees such as the right to water, land, food, and a safe environment, and how this must affect public discourse about the legitimacy and continued support of the industry. Our focus is on establishing how governments, by passing these laws or failing to regulate, threaten these human rights, rather than on showing whether agricultural enterprises, as non-state actors, can be held accountable. This is not to say that the activities of non-state

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23 See discussion infra Section II.A.
actors are not urgent or do not deserve our attention, but in this article, we choose to first center the discussion on the role of states.

The rights we examine in this article are social, cultural, and economic rights, which are typically more difficult to secure and enforce than civil and political rights. Hence, the violation of these rights might (wrongly) be shrugged off by powerful corporate and governmental actors. Despite these practical obstacles, the human rights perspective adds valuable dynamics to the ongoing debate, is novel in application to the issue, and may open new pathways for academic inquiries and legal strategies. While to date, nuisance laws, environmental laws, and animal protection laws have remained de facto exempt from judicial scrutiny in numerous states, human rights guarantees can be used to hold governments accountable. The human rights discourse also gives rise to a community of empowerment, new forms of advocacy, and the use of legal instruments in defense of marginalized groups. It offers new avenues for providing help to vulnerable persons and forges connections between the different social justice issues implicated in animal agriculture. Finally, our aim is to show how scholars, researchers, stakeholders, and the public concerned about human rights issues can bring animal agriculture into the conversation, and begin to use their power to hold their governments accountable and prompt them to address the issue proactively.

We begin with a brief overview of the environmental and social realities of agriculture, the role of law in producing them, and new research uncovering its global ramifications (Part II). We then identify and discuss the most invasive farmers’ rights—a broad term that we define as encompassing right-to-farm laws and exemptions from environmental and animal laws—and show how they have come to primarily protect large corporations. We examine the existence, scope, and form of these laws in comparative perspective in the United States (US), Canada, and Australia. We also highlight the situation at the level of the European Union (EU), which—due to its limited competences—does not have comparable right-to-farm laws (Part III). In a third step, we analyze whether and how farmers’

rights threaten the enjoyment of international human rights law (Part IV). We emphasize the right to food and the right to water and sanitation, which are entwined with the right to land.27 We also examine whether farmers’ rights undermine the people’s right to a safe environment and the emerging human right to animal protection. Finally, we connect these developments to show that international human rights law cannot afford to ignore animal agriculture and its impacts on human rights any longer, and sketch the contours of an emerging body of litigation and advocacy (Part V).

Throughout this article, we focus on the biggest contributors to human rights violations in the area of animal agriculture, without regard to corporate form and including sub-contractors. For reasons of scope, we do not grapple with small-scale agriculture and its effect on human rights. We do not deny that such violations take place or deserve our attention, but given the novelty of this topic, we focus on where we think attention is most needed. We also do not examine the human rights implications of plant-based agriculture in this paper. However, as we highlight the drawbacks of animal agriculture, it is important to acknowledge that plant-based agriculture engenders its own difficulties—though on a much lesser scale—including with respect to international human rights law.28 Given the breadth of issues covered in this paper, scope precludes offering an analysis of existing litigation and advocacy, but we do point to different entry points for operationalizing our arguments.

II. Animal Agriculture, Farmers’ Rights, and Food Sovereignty

A. The Realities of Agriculture

Since 1960, the global population has more than doubled, increasing from three billion to over seven billion people. During this period, meat production has tripled, and egg and dairy production has quadrupled.29 The high demand for animal products is predominantly satisfied by intensifying production in CAFOs where animals are housed in-doors in extreme confinement.30

29 PEW COMM’N, REPORT ON INDUSTRIAL FARM ANIMAL PRODUCTION, PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 50 (2008).
30 ld.
Due to its intensification and proliferation, the animal industry has become one of the largest factors in environmental degradation. It consumes 70% of the global freshwater, drains on 38% of the global land in use, and causes 14% of the world’s greenhouse gas emissions, generating more methane (CH₄), nitrous oxide (N₂O), and carbon dioxide (CO₂) than the global transport sector. CAFOs release immense amounts of ammonia (NH₃), hydrogen sulfide (H₂S), volatile organic compounds (VOCs), nitrous oxide (N₂O), and particulate matter (PM) that pollute air and water surfaces. CAFOs also produce disproportionate amounts of manure that overwhelm environmental systems and prevent natural cleansing or lead to overflow of manure lagoons. Farmers’ widespread use of antibiotics and antimicrobials to increase production has become a driving force in causing antimicrobial

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31 Thereby, animal production has a much larger ecological footprint (or hoof print!) than plant-based diets. Oxford researchers Poore and Nemecek were the first to conduct a meta analysis of ∼38,000 farms producing forty different agricultural goods around the world to assess the impacts of food production and consumption. They found, specifically, that plant-based diets reduce food emissions by up to 73% depending on where a person lives. Moreover, the impacts even of the lowest-impact animal products typically exceed those of vegetable substitutes. J. Poore & T. Nemecek, Reducing Food’s Environmental Impact Through Producers and Consumers, 360 SCI. 987, 988 (2019); see also Camille Lacour et al., Environmental Impacts of Plant-Based Diets: How Does Organic Food Consumption Contribute to Environmental Sustainability?, FRONTIERS IN NUTRITION, Feb. 2018, at 4–5 (2018) (finding that “a higher pro-vegetarian score was associated with lower environmental impacts”); see also 2050: A Third More Mouths to Feed, FAO.ORG (Sept. 23, 2009), http://www.fao.org/news/story/en/item/35571/icode/; UNEP, ASSESSING THE ENVIRONMENTAL IMPACTS OF CONSUMPTION AND PRODUCTION: PRIORITY PRODUCTS AND MATERIALS 51, 79 (2010).

32 Susan M. Brehm, From Red Barn to Facility: Changing Environmental Liability to Fit the Changing Structure of Livestock Production, 93 CAL. L. REV. 797, 813 (2005); Sarah C. Wilson, Hogwash! Why Industrial Animal Agriculture Is Not Beyond the Scope of Clean Air Act Regulation, 24 PACE ENVTL. L. REV. 439, 441, 444 (2007). To put this into perspective, in Oregon, 52,300 dairy cows at Threemile Canyon Farms, LLC produce 5,675,500 pounds of ammonia per year, exceeding the top manufacturing source of ammonia pollution in the US by 75,000 pounds. Id. at 439, 441, 456.

resistance in bacteria. For example, pork industry workers in many countries are more often infected by *Streptococcus aureus* than other individuals who do not work in this sector. The most common bacterium is the ST 398 strain, which is multi-resistant to antibiotics. The resulting reservoirs of resistant bacteria are of great concern from a public health and food security perspective. Overuse of antimicrobials and antibiotics also increases the probability of new treatment-resistant strains (“superbugs”) that sometimes jump between species, and have been declared epidemic. Persons suffering from zoonoses such as A/H7N7, AH5N1, AH1N1, and swine flu are chiefly industrial farm workers, who often lack protection by either their employer or the state.

More and more organizations are documenting these human rights violations in animal agriculture. *Human Rights Watch,* for example, found that:

Employers put workers at predictable risk of serious physical injury even though the means to avoid such injury are known and feasible. They frustrate workers’ efforts to obtain compensation for workplace injuries when they occur. They crush workers’ self-organizing efforts and rights of association. They exploit the perceived vulnerability

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34 Michael J. Martin et al., *Antibiotics Overuse in Animal Agriculture: A Call to Action for Health Care Providers,* 105 AM. J. PUB. HEALTH 2409 (2015); PEW COMM’N, *supra* note 29, at 11. In 2017, the World Health Organization (WHO) recommended that farmers and the food industry stop using antibiotics routinely to promote growth and prevent disease in healthy animals. *See Stop Using Antibiotics in Healthy Animals to Prevent the Spread of Antibiotic Resistance,* WORLD HEALTH ORG. (Nov. 7, 2017), [https://www.who.int/news-room/detail/07-11-2017-stop-using-antibiotics-in-healthy-animals-to-prevent-the-spread-of-antibiotic-resistance](https://www.who.int/news-room/detail/07-11-2017-stop-using-antibiotics-in-healthy-animals-to-prevent-the-spread-of-antibiotic-resistance) (“WHO strongly recommends an overall reduction in the use of all classes of medically important antibiotics in food-producing animals, including complete restriction of these antibiotics for growth promotion and disease prevention without diagnosis. Healthy animals should only receive antibiotics to prevent disease if it has been diagnosed in other animals in the same flock, herd, or fish population.”).

35 Anne Oppliger et al., *Antimicrobial Resistance of Staphylococcus Aureus Strains Acquired by Pig Farmers from Pigs,* 78 APPLIED AND ENVTL. MICROBIOLOGY 8010 (2012).

36 *Id.*


of a predominantly immigrant labor force in many
of their work sites.\textsuperscript{40}

\textbf{B. Farmers’ Rights and Agricultural Exceptionalism}

These inquiries and observations have brought issues to the
fore that have been plaguing animal agriculture for many years. A
key driver responsible for the ongoing proliferation of CAFO issues
are “farmers’ rights,” which denote laws and regulations set up with
the purpose of protecting farmers and their businesses by either
shielding them from lawsuits or exempting them from the law
altogether.

“Farmers’ rights” come in two forms: (i) right-to-farm laws
and (ii) exemptions from environmental and animal laws. Right-to-
farm laws prevent nuisance lawsuits\textsuperscript{41} against farmers engaging in
“practices that are commonly or reasonably associated with
agricultural production.”\textsuperscript{42} These laws declare such practices
indefeasible through statutory limitations for nuisance suits, through
exemptions from zoning and disclosure, by declaring void opposing
local ordinances, or by granting a fee recovery for the successful
defense of a nuisance lawsuit.\textsuperscript{43} By 1992, all fifty states of the US
had enacted such laws, and equivalent legislation was passed in
Australia and Canada soon after.\textsuperscript{44} Right-to-farm laws emerged from
an effort to preserve and promote small-scale farmers, to whom most
people have an emotional connection and who many think make a
valuable contribution to society.\textsuperscript{45} Today, thanks to the
corporatization of animal agriculture, these laws have come to
benefit vertically integrated and monopolized corporations by
insulating their actions and giving them virtual standard-setting
authority.\textsuperscript{46} Pointing to the host of environmental and social harms
that emerged from this blanket authorization, critics label these laws

\textsuperscript{40} \textit{HUMAN RIGHTS WATCH, BLOOD, SWEAT, AND FEAR: WORKERS’ RIGHTS IN US
MEAT AND POULTRY PLANTS} 1–2 (2004).
\textsuperscript{41} E.g., nuisance lawsuits regarding noise, odors, visual clutter, or cruelty inflicted
on animals.
\textsuperscript{42} See, e.g., \textit{ARK. CODE ANN. § 2-4-107(b)(1)} (West 2009).
\textsuperscript{43} See, e.g., \textit{id.}
\textsuperscript{44} Laura Alford & Sarah Berger Richardson, \textit{Right-to-Farm Legislation in Canada:
Exceptional Protection for Standard Farm Practices}, \textit{50 OTTAWA L. REV.} 131, 136
(2018).
\textsuperscript{45} Id. at 150.
\textsuperscript{46} Id. at 151; David Pimentel, \textit{Ethical Issues of Global Corporatization: Agriculture
and Beyond}, \textit{83 POULTRY SCI. SYMP.: BIOETHICAL CONSIDERATIONS IN ANIMAL

These exemptions and right-to-farm laws are the most noteworthy farmers’ rights we examine herein, but they are only one manifestation of a broader, and more pervasive problem, namely that of agricultural exceptionalism. Agricultural exceptionalism is a belief system that fuels a range of exemptions or laws protecting agriculture from the purview of the public, including in the areas of environmental law, animal law, and property law (as we examine in this article), but also in trade law, employment law, and many other areas.\footnote{In the area of employment law, general health and safety regulations, minimum wage, and overtime requirements are all subject to exceptions for agricultural workers under the Fair Labor Standards Act. 29 U.S.C. § 213(a)(6) (2006). Regarding labor law, the most notable exemption is that the National Labor Relations Act, the US’s primary legislation governing the rights of workers to bargain collectively, excludes “agricultural laborers” from its definition of “employee” and its attendant protections. 29 U.S.C. § 213(b)(12) (2006); see generally Guadalupe T. Luna, \textit{An Infinite Distance?: Agricultural Exceptionalism and Agricultural Labor} 1 U. OF PA. J. OF LAB. AND EMP. L. 487 (1998); Michael Trebilcock & Pue Kristen, \textit{The Puzzle of Agricultural Exceptionalism in Trade Policy}, 18 J. OF INT’L ECON. L. 233 (2015) (analyzing agricultural exceptionalism in trade law).} Agricultural exceptionalism became “fully established as part of the post-war welfare consensus”\footnote{Carsten Daugbjerg & Peter Feindt, \textit{Post-Exceptionalism in Public Policy: Transforming Food and Agricultural Policy}, 24 J. OF EUR. PUB. POL’Y 1565, 1570 (2017).} and is today sustained by widely held views among the public, legislators, and the judiciary that farmers do us a service by providing the public with food. Even with readily available evidence showing that large animal agricultural business is often doing the opposite, as we will show in this article, the industry has resisted substantial transformation.\footnote{Carsten Daugbjerg & Alan Swinbank, \textit{Ideas, Institutions, and Trade: The WTO and the Curious Role of EU Farm Policy in Trade Liberalization} 12–14 (Oxford University Press 2009).} Agricultural exceptionalism, by insulating agricultural producers from regulation, remains the dominant paradigm.
C. North Carolina is Everywhere

The short-term impacts of animal agriculture (and, thus, the laws exempting it) are now well-documented,52 but the long-term impacts and effects of these farming activities on the environments and communities further apart are still underexplored, including their contribution to global food shortages.53 CAFOs remain the standard method of generating animal products while being grossly unsustainable from an ecological perspective and a driving cause of food scarcity. The ever-increasing consumption of animal products requires a significant portion of the world’s crop production, raises cereal prices, and depletes grain available for direct human consumption. Because meat-based diets use far more of the global food and water resources than they provide, the high demand for water and protein-rich plants to produce meat threatens agriculture and drinking water supplies.54 The inefficiency of animal agriculture compared to plant agriculture is striking: CAFOs require ten times the land and eleven times the fossil fuel-based energy that plant farming uses.55

The continuingly high contribution of animal agriculture to food insecurity56 has a disparate impact on the poor, locally and internationally. Locally, agricultural business practices stifle low-income communities, racial minorities, and migrant workers.57 Animal agriculture is also contributing considerably to hunger and death on foreign soil: “[e]ighty-two percent of the world’s starving children live in countries where food is fed to animals, which are then killed and eaten by wealthier individuals in developed countries like

52 See discussion infra Section II.A.
53 See discussion infra Sections IV.A, IV.D.
56 FOOD & AGRIC. ORG., WORLD FOOD SUMMIT PLAN OF ACTION ¶ 1 (1996) (“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”).
As the Food and Agriculture Organization (FAO) explains, due to the ongoing growth of CAFOs, “Sub-Saharan Africa’s share in the global number of hungry people could rise from 24 percent to between 40 and 50 percent” by 2050.59 In line with this prediction, in March 2017, the United Nations (UN) announced that the world will soon witness the most severe famine since 1945.60 Twenty million people face the threat of starvation and famine in Kenya, Somalia, South Sudan, and Yemen.61

Civil society’s growing awareness of the threat of food scarcity and dependence on foreign nations has sparked a global movement for food sovereignty, mostly in majority world countries.62 In 2007, five hundred delegates from eighty countries signed the Declaration of Nyéléni, a soft law instrument which recognizes peoples’ right to define their own agriculture and food

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59 FOOD & AGRIC. ORG., HOW TO FEED THE WORLD IN 2050, at 30 (2009).


61 U.N. NEWS, supra note 60. In the year 2017 alone, 1.4 million children were expected to starve to death. UNICEF Warns That 1.4 Million Children Could Die from Famine in Four Countries, DEUTSCHE WELLE (Feb. 21, 2017), https://www.dw.com/en/unicef-warns-that-14-million-children-could-die-from-famine-in-four-countries/a-37643854 (stating “[a]most 1.4 million children suffering from severe malnutrition could die this year from famine in Nigeria, Somalia, South Sudan and Yemen . . .”).

62 In international law, we typically speak of “developing states” or the “Third World” to denote countries in juxtaposition to “developed countries.” These terms imply that development is a standardized and linear process, and that certain countries have finished developing while others are still striving to reach this form of development. Because there are many ways in which states evolve over time, and because nations should be recognized for their different strengths and challenges, these terms seem both incorrect and inappropriate. In recognition thereof, scholarship is increasingly using the terms “majority world” and “minority world.” The former highlights the fact that the majority of the world’s population lives in these parts of the world previously identified as “developing,” and the latter refers to those countries traditionally identified as “developed,” where a minority of the world’s population resides. See, e.g., Shahidul Alam, Majority World: Challenging the West’s Rhetoric of Democracy, 34 AMERASIA J. 87 (2008); Samantha Punch, Exploring Children’s Agency Across Majority and Minority World Contexts, in RECONCEPTUALISING AGENCY AND CHILDHOOD: NEW PERSPECTIVES IN CHILDHOOD STUDIES 183 ff. (Florian Esser et al. eds., 2016).
policies. In the years following the declaration, Bolivia, Ecuador, Egypt, Mali, Nepal, Senegal, Venezuela, and other states have enshrined the right to food sovereignty in their constitutions, making it a core aspiration of their policies to reclaim authority in decision-making and the production of food. This movement strongly resonates with the early motivations for right-to-farm laws, namely to ensure that food can be produced locally and feeds the people. Thanks to the appropriation of right-to-farm laws by corporate giants, however, the two are now diametrically opposed: the Global South struggles to regain security over food, while the Global North claims a right to harm.

This brief overview of the most pressing issues that dominate the intersections of animal agriculture, the environment, and human rights paints a dire picture, yet a loosely connected one. In what follows, we zoom in on the most invasive farmers’ rights in the US, Canada, Australia, and the EU. We focus on existing laws and regulations, but also discuss proposed bills. We show how these laws have withstood judicial and public scrutiny even in the face of the most flagrant pollutions and human rights violations, among others, because they have come to protect primarily large corporations. As we will argue, it is these farmers’ rights—forming part of the web of agricultural exceptionalism—that make human rights violations possible. After all, states are not only uncommitted to regulating the issue, but they aim to declare legal grossly illegal practices. While states are prima facie at liberty to do so under domestic law (when it comes to environmental law, animal law, etc.), their laws are subject to international scrutiny, particularly the international human rights law regime, which can put a halt to the ongoing insulation of animal agriculture.

III. The Rise of Farmers’ Rights

A. United States

Under the long-standing US common law nuisance rule, agricultural operations could not unreasonably interfere with other landowners’ use and enjoyment of land or cause them personal or emotional harm. In 1980, due to the rapid demographic expansion

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65 Jason Jordan, A Pig in the Parlor or Food on the Table: Is Texas’ Right to Farm Act an Unconstitutional Mechanism to Perpetuate Nuisances or Sound Public Policy
and urbanization witnessed in the US, the country was estimated to lose close to three million acres of land previously used for agricultural purposes per year. In reaction to the growing urban sprawl, Iowa, Louisiana, and Wyoming passed the first right-to-farm statutes in 1978. The goals of these laws were to shield farmers from nuisance suits and to prevent further loss of agricultural land. Starting in the 1980s, all fifty states began to enact right-to-farm laws, a development pushed by strong agricultural lobbying and spurred by Congressional plans to exempt farms from federal environmental laws.

While US right-to-farm laws widely differ in terms of scope and applicability, they all protect agricultural practices through one or several of the following means:

- **The “Coming to the Nuisance Doctrine”:** Nuisance lawsuits aimed at halting disproportionate noise, odors, visual clutter, or cruelty inflicted on animals cannot be brought against operations that preexisted surrounding land uses.

- **Statutes of Limitations:** Plaintiffs can introduce a lawsuit during a limited period of time only (usually one year) after the beginning of a harmful activity.

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Ensuring Sustainable Growth?, 42 TEX. TECH L. REV. 943, 951 (2010); see, e.g., Pendoley v. Ferreira, 187 N.E.2d 143, 146–47 (Mass. 1963) (providing an example in which a pig producer had to liquidate his business as he expanded his pig production, due to nuisance suits by the nearby village).

66 NAT’L AGRIC. LANDS STUDY, FINAL REPORT 1981, at 8, 35 (1981) (stating “the United States has been converting agricultural land to nonagricultural uses at the rate of about three million acres per year . . .”). In Oakland County, for example, 50.8% of the land area constituted farmland in 1950, while in 1978, this proportion had shrunk to 13.9%. 1 BUREAU OF THE CENSUS, U.S. DEP’T OF Commerce, UNITED STATES CENSUS OF AGRICULTURE: 1950, pt. 6, at 46 (1952); 1 BUREAU OF THE CENSUS, U.S. DEP’T OF Commerce, 1978 CENSUS OF AGRICULTURE 1978, pt. 22, at 504 (1981).

67 Jeffry R. Gittins, Bormann Revisited: Using the Penn Central Test To Determine the Constitutionality of Right-To-Farm Statutes, 2006 BYU L. REV. 1381, 1383.

68 Id.


states that have adopted this rule include Minnesota, Mississippi, Pennsylvania, and Texas.

- **Immunity for Agricultural Startups or Business Expansion**: When agribusiness expands, or when a new agricultural business may pose a new environmental threat or nuisance to its neighbors, some states, such as Georgia, deny a new running period for statutes of limitations. They thereby allow farms to expand to whatever size they prefer, regardless of the nature and scale of their impact on the environment. In other states, such as Minnesota, new claims can only be made if an operation expands by at least 25%.

With right-to-farm laws in place, it is possible for agricultural businesses to enjoy de facto immunity from law, especially if a state chooses to combine these three means. However, it is worth noting that, while said exemptions cover all types of agricultural businesses, only “practices commonly or reasonably associated with agricultural production” (known as “generally accepted agricultural management practices,” or “GAAMPs”) remain exempt from review. Moreover, many states still require that agribusinesses do not negligently or illegally impact their neighbors or public goods.

Still, CAFOs remain very well protected. In the best case, what counts as a generally accepted practice is determined by

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72 MINN. STAT. ANN. § 561.19(2) (West Supp. 2010).
73 MISS. CODE ANN. § 95-3-29(1) (West Supp. 2009).
74 3 PA. STAT. AND CONS. STAT. ANN. §§ 951–957, §954(a) (Westlaw through 2019 Sess.).
75 TEX. AGRIC. CODE ANN. §§ 251.001–.006, § 251.004 (West Supp. 2009).
76 GA. CODE ANN. § 41-1-7(d) (West Supp. 2009) (“If the physical facilities of the agricultural operation or the agricultural support facility are subsequently expanded or new technology adopted, the established date of operation for each change is not a separately and independently established date of operation and the commencement of the expanded operation does not divest the agricultural operation or agricultural support facility of a previously established date of operation.”).
77 MINN. STAT. ANN. § 561.19(b) (West Supp. 2010).
78 Bormann v. Bd. of Supervisors In and For Kossuth Cty., 584 N.W.2d 309, 315–21 (Iowa 1998).
80 KY. REV. STAT. ANN. § 413.072 (West 2010) (exempting negligent behavior).
81 OHI0 REV. CODE ANN. § 3767.13 (West 1982) (failing to exempt any action that becomes injurious to the health, comfort, or property of individuals or of the public).
commissions of agriculture. In all other cases, the agri-food industry itself sets the standard for GAAMPs, and farmers are allowed to set up and rely on unwritten GAAMPs. Thus, even if a practice is woefully intrusive, it can be deemed “generally accepted.” GAAMPs in most cases do not demand adherence to practices a reasonable person would consider adequate, but, instead, revolve around a standard of “normalcy.” “Normal farm practices” are those practices that prevail in the industry and are shared by a large enough number of agribusinesses. This is a considerable degree of self-regulation given to agricultural corporations that risks threatening public goods, as the practices these corporations set often do not reflect the same balancing of interests between economic growth, sustainability, and food security that would be expected from legislatively-defined standards.

Most states only lift CAFOs’ nuisance immunity if their activities have “a substantial adverse effect on public health and safety.” This caveat is highly questionable from a common good perspective, because the public cannot be assumed to have agreed to sweeping immunities threatening public goods, such as a safe environment, sustainable food policies, and the humane treatment of animals. Moreover, specific provisions state that farms that did not constitute a nuisance prior to land use changes need not comply with GAAMPs to benefit from nuisance protection. Right-to-farm laws also often shift the burden of proof to the affected parties, who must show that the CAFO producer acted unreasonably. This conflicts with the aforementioned long-standing rule under the common law.

83 Also, the GAAMPs are neither debated and passed by parliament nor published in administrative codes. Patricia Norris, Gary Taylor & Mark Wyckoff, When Urban Agriculture Meets Michigan’s Right to Farm Act: The Pig’s in the Parlor, 2 Mich. St. L. Rev. 365, 388, 397 (2011).
85 Alford & Berger Richardson, supra note 44, at 152.
86 Id. at 131.
87 Id. at 142–43.
88 Id. at 143.
91 Gittins, supra note 67, at 1392.
Many states (such as Georgia) do not provide immunity to farmers from only private nuisance; they also shield them from public nuisance claims, i.e., claims pertaining to nuisances threatening public health, safety, or welfare, or community resources, such as water supplies. The right-to-farm laws of several states also preclude nuisance claims against zoning ordinances and other local laws. In Kentucky, legislators have gone so far as to make it a statutory rule that “[n]o agricultural or silvicultural operation or any of its appurtenances shall be . . . subject to any ordinance that would restrict the right of the operator of the agricultural or silvicultural operation to utilize normal and accepted practices.”

Right-to-farm laws emerged from a relatively innocuous desire to support traditional family-run farms as more and more people moved to the countryside. Today, most continue to defend the legitimacy of these laws by invoking this narrative. However, in the past decades, agriculture has been subject to immense restructuring, in particular as regards the concentration of production. As technological changes have increased the number of animals that can be handled at a plant, producers keeping up with economies of scale have driven out or taken over weaker competitors through horizontal integration. Corporations with large assets began to take over the landscape through vertical integration, setting up mergers and acquisitions with feed producers, breeders, food processors, and meatpackers. The structural changes of agribusiness mean that right-to-farm laws are now primarily

93 GA. CODE ANN. § 41-1-7 (West 2018).
95 MICH. COMP. LAWS ANN. § 286.473 (West 2018); Charter Twp. of Shelby v. Papesh, 704 N.W.2d. 92, 96–102 (Mich. Ct. App. 2005) (“[I]f defendants’ farm is commercial in nature and in compliance with the GAAMPs, it is a farm operation protected by the RTFA. The ordinance conflicts with the RTFA to the extent that it allows plaintiff [township] to preclude a protected farm operation by limiting the size of a farm.”).
96 KY. REV. STAT. ANN. § 413.072(2) (Westlaw through 2019 Sess.).
97 See Madeleine Skaller, Protecting the Right to Harm: Why State Right to Farm Laws Should Not Shield Factory Farms from Nuisance Liability, 27 SAN JOAQUIN AGRIC. L. REV. 209, 216 (2018) (stating “[r]ight to farm laws were passed to ensure the viability of agricultural operations when people were moving from urban to rural areas”). Some criticize that the fear of urban sprawl impacting agriculture is a myth and that most complainants were in fact rural residents. Alford & Berger Richardson, supra note 44, at 149–50.
98 Brehm, supra note 32, at 797.
profiting large-scale and industrialized methods of production, but these laws are ill-equipped to handle the impact of these methods on the environment, animals, and human health. Moreover, in some cases, state legislatures have begun to limit right-to-farm laws to commercial operations and have denied non-commercial farmers and hobbyists the benefits of anti-nuisance protection.\textsuperscript{100} In this sense, and as Alford and Berger Richardson argue, “RTFs [right-to-farm laws] are less about ensuring the right to ‘farm’ and more about ensuring the right to cheaply ‘produce’ large quantities of food.”\textsuperscript{101}

These various features of right-to-farm laws confirm that unlike food sovereignty legislation, which seeks to empower the public, right-to-farm laws protect the interests of agribusiness at the expense of the collective. In \textit{Bormann} (1998), the Iowa Supreme Court became the first US judicial institution to invalidate a state’s right-to-farm laws—which granted farmers unlimited immunity, regardless of how long they had been running their business.\textsuperscript{102} The Court found that these laws were an unconstitutional taking.\textsuperscript{103} The \textit{Bormann} ruling, however, has been widely criticized for qualifying the issue as a \textit{per se} taking, instead of a regulatory taking.\textsuperscript{104} Six years later, in \textit{Gacke}, the same court declared Iowa right-to-farm laws to be in violation of the state’s constitutional clause on inalienable rights.\textsuperscript{105} This trend, though anxiously awaited by agricultural industries, was followed only by few neighboring states.\textsuperscript{106}

Besides benefitting from right-to-farm laws, animal agriculture enjoys exemptions from environmental and animal protection laws across the US at both the federal and state level. On the federal plane, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), which provides that polluters are responsible for the expenses of the cleanup of hazardous substances release, does not expressly cover agricultural

\textsuperscript{101} Alford & Berger Richardson, \textit{supra} note 44, at 149.
\textsuperscript{102} \textit{Bormann}, 584 N.W.2d at 309; \textit{Iowa Code Ann.} \textsection 352.11(1)(a) (Westlaw through 2019 legislation).
\textsuperscript{103} \textit{Bormann}, 584 N.W.2d at 309; \textit{Iowa Code Ann.} \textsection 352.11(1)(a) (Westlaw through 2019 legislation).
\textsuperscript{104} Centner, \textit{supra} note 71, at 124–25; Beidel, \textit{supra} note 94, at 177.
\textsuperscript{105} Gacke v. Pork Xtra, L.L.C., 684 N.W.2d 168, 179 (Iowa 2004).
\textsuperscript{106} Examples of states that followed this trend include Maryland and North Carolina. McIlrath v. Prestage Farms of Iowa, L.L.C., No. 15-1599, 2016 WL 6902328 (Iowa Ct. App. Nov. 23, 2016); In re NC Swine Farm Nuisance Litig., No. 5:15-CV-00013-BR, 2017 WL 5178038 (E.D. N.C., Nov. 8, 2017).
practices.\textsuperscript{107} While there is a recent trend to hold agricultural producers liable under the CERCLA,\textsuperscript{108} animal agricultural industries continue to escape the Resource Conservation and Recovery Act (RCRA). The RCRA, the nation’s principal hazardous waste management and disposal regulation law, fails to classify waste from CAFOs as hazardous.\textsuperscript{109} The situation is markedly better under the federal Clean Water Act (CWA). Since 2002, large CAFOs must obtain a permit under the National Pollutant Discharge Elimination System (NPDES) to discharge animal waste, fertilizers, and pesticides into the waters of the US.\textsuperscript{110} Nonetheless, the CWA remains largely toothless, as it expressly excludes agricultural stormwater “discharges . . . [and] return flows from irrigated agriculture,”\textsuperscript{111} permitting “most agricultural sources to escape Section 402 regulation . . .”\textsuperscript{112} Another major federal law, the Clean

\begin{footnotes}
\footnote{112}{Jan G. Laitos & Heidi Ruckriegle, \textit{The Clean Water Act and the Challenge of Agricultural Pollution, 37 VT. L. REV. 1033, 1058 (2013).}}
\end{footnotes}
Air Act (CAA), which regulates hazardous air pollutants,\textsuperscript{113} exempts all CAFOs from coverage. Indeed, the administrator has the authority to “establish a greater threshold quantity for, or to exempt entirely, any substance that is a nutrient used in agriculture when held by a farmer.”\textsuperscript{114} Even if the CAA were applicable to CAFOs, it is important to consider that the US Environmental Protection Agency (EPA) has declined to bring cases against CAFOs based on CAA violations.\textsuperscript{115} As a result, environmental law has given animal farms a “virtual license”\textsuperscript{116} to cause habitat loss, soil erosion and degradation, water depletion, and to pollute water and air across the US.

Similar, if not more sweeping, exemptions have been put in place to inhibit animal welfare claims. The North Dakota Constitution was amended in response to California’s Proposition 2 amendment, which required all confined farm ed animals to have sufficient space to stand up, turn around freely, and fully extend limbs and wings, by adding that:

The right of farmers and ranchers to engage in modern farming and ranching practices shall be forever guaranteed in this state. No law shall be enacted which abridges the right of farmers and ranchers to employ agricultural technology, modern livestock production, and ranching practices.\textsuperscript{117}

Thereby, the adoption of laws that would guarantee animals a bearable life during confinement has been rendered infeasible. Similarly, under the New York Agriculture and Markets Law, local laws, ordinances, rules, or regulations may restrict the operations of agricultural districts only if public health or safety is threatened.\textsuperscript{118} Animal welfare, though of public concern, cannot limit any of these agricultural operations, as it is not deemed to fall under these exceptions.

Those benefiting from these immunities and rights are primarily corporations (rather than individual farmers), which aligns with the growing lobbying efforts of business to secure immunity through ag-gag laws and veggie libel laws. Ag-gag laws generally...

\textsuperscript{114} 42 U.S.C. §§ 7412(r)(5) (1994 & Supp. III 1997); see also Wilson, supra note 32, at 441.
\textsuperscript{115} Ruhl, supra note 111, at 263.
\textsuperscript{116} Id. at 263.
\textsuperscript{117} N.D. CONST., art. XI, § 29; see Pifer, supra note 69, at 716.
\textsuperscript{118} N.Y. AGRIC. & MKTS. LAW § 305-a(1).
criminalize activities that expose and denounce animal agricultural activities without the consent of their owner, particularly when these activities are inhumane, unsafe, or even illegal. In the US, seven states have passed ag-gag laws and more than twenty-four such bills have been introduced in other states. Veggie libel laws, which establish (strict) liability for members of the public who publicly criticize food production practices, have passed in more than thirteen US states.

In addition, the federal Animal Welfare Act (AWA), the Twenty-Eight Hour Law, and the Humane Methods of Slaughter Act (HMSA) all turn a blind eye to farmed animals. The AWA does not apply to farmed animals; the Twenty-Eight Hour Law, which seeks to protect animals during transport, fails to cover transport by truck, by air, and on water (and hence most of farm animal transportation); and the HMSA, which requires farmed animals to be rendered insensible to pain prior to being hoisted, shackled, or cut, does not apply to chickens and fish, which represent the highest number of animals killed for the purposes of food production. On a state level, animal anti-cruelty statutes have largely exempted farm practices from their application because they consider them to be “common farm practices.” As Schaffner explains, this creates a paradox by which “criminal laws, designed to protect animals from the intentional infliction of pain and suffering, perpetuate and in fact endorse institutionalized cruelty to animals.” As a consequence,
only wrongs committed against animals that do not restrict farmers’ common economic interests (such as causing animals to starve or giving them inappropriate shelter) constitute animal cruelty. Considering that the US is home to over 450,000 CAFOs, these far-reaching exemptions have the effect of rendering most laws generally inapplicable to the animal agricultural sector.

B. Canada

Nuisance laws protecting property owners from interference in their property rights have been part of a long-standing common law rule in Canada since the 1880s. Under these nuisance laws, plaintiffs could ask the court to issue an injunction to cease disturbance (such as excessive noise, manure smell or overflow, or even excessive screams by animals), and seek monetary damages and compensation for harms.

Over the past forty years, however, all states and provinces of Canada have passed right-to-farm laws that greatly limit anti-nuisance claims. The first right-to-farm laws were enacted in Manitoba in 1976. They were followed by Quebec (1978), New Brunswick (1986), Alberta (1987), Ontario (1988), British Columbia (1989), Saskatchewan (1995), Prince Edward Island (1998), and Newfoundland and Labrador (2003). The initial purpose of these laws was to prevent urban encroachment on agricultural land through nuisance complaints about odor, noise, chemicals, pests, etc., because “those moving into the country may be seeking fresh air, quiet, and scenery. The expectations of new country residents can come into conflict with agriculture when they experience the realities of modern agricultural production.”

LAW AND WELFARE: INTERNATIONAL PERSPECTIVES 37 (Deborah Cao & Steven White eds., 2016).
127 E.g., Westfall v. State, 10 S.W.3d 85 (Tex. Ct. App. 1999); see also FRASCH ET AL., supra note 125, at 79.
128 Wilson, supra note 32, at 440.
129 BETH BILSON, THE CANADIAN LAW OF NUISANCE (Butterworths 1991); Rylands v. Fletcher [1868], UKHL 1, 3 H.L. 330.
131 Id.
132 Id.
133 Keith Wilson, Are You Losing Your Right to Farm?, 20 WCDS ADVANCES IN DAIRY TECH. 245, 246 (2008).
The scope of Canadian right-to-farm laws is typically restricted to “normal farm practices.” British Columbia, for instance, defines such a practice as one that “is conducted by a farm business in a manner consistent with”:

(a) proper and accepted customs and standards as established and followed by similar farm businesses under similar circumstances, and

(b) any standards prescribed by the Lieutenant Governor in Council, and includes a practice that makes use of innovative technology in a manner consistent with proper advanced farm management practices . . .134

The burden of proof usually lies on the complainant, who must show that a disturbance lies outside normal agricultural practices.135 The effect of right-to-farm laws in Canada is analogous to that of their US counterparts: no damages can be awarded for the infringement of private property by “normal agricultural practices,” and no injunction can be obtained to stop the nuisance.136

The more disturbing aspect of right-to-farm laws in Canada and elsewhere, however, is that the concept of “normal agricultural or farm practice” may render legal otherwise illegal practices, such as dumping toxic waste or inflicting cruelty to animals, provided a sufficiently representative number of farmers engages in them.137 This is, for example, the case in Saskatchewan.138 Another illustration is Ontario’s Farming and Food Production Protection Act, which determines that “[n]o municipal by-law applies to restrict a normal farm practice carried on as part of an agricultural operation.”139 Thus, not only are people prevented from accessing courts to ask for economic and injunctive relief: they are further barred from using their political rights in local policy-making.140 Because environmental regulation may fall under the authority of the municipalities, scholars have linked rising environmental pollution

136 McCormally, supra note 130, at 2.
137 Id.
139 Farming and Food Production Protection Act, S.O. 1998, c. 1, 6(1) (Can. Ont.).
140 Alford & Berger Richardson, supra note 44, at 156.
and degradation to the adoption of right-to-farm laws.\textsuperscript{141} Only a few Canadian provinces (such as British Columbia, Prince Edward Island, and Quebec) have determined that nuisance suits can only be excluded if the practices do not violate other laws, such as environmental protection acts or laws protecting human health.\textsuperscript{142}

Canadian right-to-farm laws provide that claims about nuisances are adjudicated by the Agricultural Operations Review Board, and not by a court.\textsuperscript{143} The board is headed by current or former farmers,\textsuperscript{144} is only rarely used, and does not make its decisions publicly available.\textsuperscript{145} Although judicial bodies can review board decisions using the standard of reasonableness,\textsuperscript{146} they usually show great deference, commending the specialized knowledge of these boards and their ability to gather firsthand evidence.\textsuperscript{147} The immunization from administrative adjudication, paired with broad judicial deference and strict time limits for appeal, all “insulate the farming industry from civil liability.”\textsuperscript{148}

In Canada, agriculture is mainly regulated on a provincial level, and occasionally on a municipal level, with the exception of, \textit{inter alia}, the Canadian Environmental Protection Act, the Pest Control Products Act, the Water Act, and the Fisheries Act.\textsuperscript{149} All of Canada’s provinces lay down environmental standards that prohibit depositing pollutants into water bodies unless the discharge

\textsuperscript{\text{142}} \textit{E.g.}, Farm Practices Act, R.S.P.E.I. 1998, c. 87, s. 2 (Can. P.E.I.); Act Respecting the Preservation of Agricultural Land and Agricultural Activities, R.S.Q. 1996, c. 26, s. 79.17–79.19.2, s. 100 (Can. Que.); Farm Practices Protection (Right to Farm) Act, R.S.B.C. 1996 c. 131, s. 2 (Can. B.C.).
\textsuperscript{\text{143}} McCormally, \textit{supra} note 130, at 3.
\textsuperscript{\text{144}} In Saskatchewan, the Board is composed of six members representing the milk industry, cattle feeder producers, three producers at large, and a representative of the Saskatchewan Association of Rural Municipalities. \textit{Id.}
\textsuperscript{\text{145}} There is an exception for the Farm Industry Review Board of British Columbia, which publishes all of its decisions online. \textit{Id.}
\textsuperscript{\text{148}} Alford & Berger Richardson, \textit{supra} note 44, at 156.
\textsuperscript{\text{149}} BRUBAKER \textit{supra} note 141, at 10.
has been expressly permitted.\textsuperscript{150} Some have also introduced “minimum distance separation” requirements between livestock facilities and their neighbors.\textsuperscript{151} Among the Canadian provinces, only Quebec\textsuperscript{152} and Saskatchewan\textsuperscript{153} have specific acts designed to cover CAFOs. Many of the laws still lack limitations on livestock densities or total sizes.\textsuperscript{154} Another notable weakness of environmental policy regulation in Canada is the fact that these are merely guidelines or best practices issued by private organizations. As a result, CAFO regulation chiefly lies with corporate authorities, and the odor and water effects of CAFOs remain outside the reach of collective agricultural supply management policies.\textsuperscript{155}

In May 2000, the city of Walkerton, Ontario, suffered a widespread contamination of \textit{Escherichia coli} and \textit{Campylobacter jejuni} bacteria that came from manure that had been spread on a nearby farm, as a consequence of which seven people died and many more suffered long-lasting injuries.\textsuperscript{156} Since then, many provinces have reviewed their laws,\textsuperscript{157} though sweeping exemptions are still common. To date, the rules on waste of the Ontario Environmental Protection Act do “not apply to animal wastes disposed of in accordance with both normal farming practices and the regulations

\textsuperscript{150} E.g., Environmental Management and Protection Act, R.S.S. 2010, c. E-10.22, s. 8 (Can. Sask.); e.g., Clean Water Act, R.S.N.B. 1989, c. C-6.1, s. 12(1) (Can. N.B.); e.g., Environment Quality Act, C.Q.L.R., c. Q-2, s. 20, 22 (Can. Que.); e.g., \textit{Règlement sur les exploitations agricoles}, R.R.Q., Q-2 r. 26, s. 4–5 (Can. Que.).

\textsuperscript{151} Most of these range at minimum at 150 meters. E.g., Standards and Administration Regulation, Alta. Reg. 267/2001, s. 3 (Can. Alta.). The distance is typically calculated based on a specific formula. E.g., A x B x C; A equals 500 meters, B equals manure factor, and C equals livestock factor. Jerry Speir et al., \textit{Comparative Standards for Intensive Livestock Operations in Canada, Mexico, and the United States} 54 (Comm’n for Envtl. Cooperation 2003).

\textsuperscript{152} Agricultural Operations Regulation, C.Q.L.R., c. Q-2, s. 1–2 (Can. Que.).

\textsuperscript{153} Agricultural Operations Act, R.S.S. 1995, c. A-12.1 s. 19–23 (Can. Sask.).


\textsuperscript{157} Until relatively recently, environmental policies have also exempted Canadian agriculture from scrutiny. Predrag Rajas et al., \textit{Canadian Agricultural Environmental Policy: From the Right to Farm to Farming Right}, in \textit{The Economics of Regulation in Agriculture: Compliance with Public and Private Standards} 55, 56 (Floor Brouwer, Glenn Fox, Roel Jongenee & R. A. Jongeneel eds., 2012).
made under the Nutrient Management Act.”158 Similarly, under the British Columbia Environmental Management Act, rules on waste disposal do not prohibit “emission into the air of soil particles or grit in the course of agriculture or horticulture.”159 Under the Manitoba Environment Act, “[a] person involved in an agricultural operation” will not be punished for the unauthorized release of pollutants “if the release occurred through the use of normal farm practices.”160

Analogously to their US counterparts, Canadian agricultural industries enjoy substantial discretion as to how they treat the animals they own. Cruelty inflicted on animals used for agricultural purposes is exempt under the laws of Alberta,161 British Columbia,162 Manitoba,163 Nova Scotia,164 Ontario,165 Quebec,167 Saskatchewan,168 and Yukon.169 Thus, in these provinces, “common farm practices,” regardless of whether they inflict suffering or even blatant cruelty on animals, never constitute animal cruelty in a legal sense.170 As a consequence, harm caused to animals in the agricultural sector is deemed legal.171

C. Australia

Australian law (like English law, upon which it heavily draws) in principle provides that claims can be brought against both public and private nuisances to stop a nuisance and to claim...
damages. Sometimes, however, the activity at stake is authorized under the law of the Australian states (New South Wales, Queensland, South Australia, Tasmania, Victoria, and Western Australia) and territories. Compared to the US and Canada, Australian right-to-farm legislation is recent and scarce.

Like most states, Australia witnessed “a socio-historical transition from small, family-operated farming concerns to large, corporate-owned agricultural enterprises.” As Alex Bruce and Thomas Faunce observe, this development severed the close relationship and emotional bond that farmers had with their animals and the environment. Still, in the early 1990s, Australian authors noted that the US experience with right-to-farm laws did not provide compelling reasons for introducing similar legislation in Australia. The first and, to date, only Australian right-to-farm law—the Primary Industries Activities Protection Act 1995—was passed by Tasmania in 1995. The reasons leading to the adoption of the Act resemble those that motivated the passing of analogous legislation in North America, namely the concerns that growing urbanization might jeopardize or constrain farming and that environmental regulation would restrict farming practices. In light of these concerns, the Tasmanian Act aims, on the one hand, to “protect persons engaged in primary industry by limiting the operation of the common law of nuisance in respect of certain activities that are

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172 The law of nuisance is based on the common law, and it has been codified in some statutes. See, e.g., Primary Industries Activities Protection Act 1995 (Tas.) s. 3(1) (Austl.).

173 One example is the statutory exceptions established by the Civil Liability Acts adopted in various Australian states. See, e.g., Wrongs Act 1958 (Vict.) s 30 (Austl.); Civil Liability Act 2002 (N.S.W.) s 72(1) (Austl.).


175 Id. at 363.

176 E.g., John Paterson, A Right to Farm; A Right to Live?, 28 AUSTRALIAN PLANNER 8, 8 (1990).


178 Primary Industries Activities Protection Act 1995 (Tas.) (Austl.).


incidental to efficient and commercially viable primary production.” 181 It limits the power of courts to order the complete cessation of the activity at stake. 182 On the other hand, for farming activities not to constitute a nuisance, a number of conditions must be fulfilled, including the condition that “the activity is not being improperly or negligently carried out.” 183 Moreover, farming activities must respect state and Commonwealth laws and council by-laws, 184 and they cannot derogate from “the operation or effect of any other Act.” 185 In other terms, environmental regulation may still apply. In light of these caveats, it is surprising that the Tasmanian Environmental Management and Pollution Control Act of 1994 provides that an activity that conforms with the state’s right-to-farm law does not constitute an environmental nuisance. 186 When reviewing the Primary Industries Activities Protection Act in 2014, the Tasmanian government expressed its intent “to strengthen the legal protection of farmers” in the future. 187

While Tasmania is, as mentioned, the only Australian state that has adopted a right-to-farm law, other states have recently witnessed similar legislative proposals. In New South Wales, member of the state parliament, Don Page, introduced the Protection of Agricultural Production (Right-to-Farm) Bill in 2005, which is based on similar concerns as those that led to the enactment of right-to-farm legislation in Tasmania and in the US. 188 However, the Bill did not garner enough support in the state parliament. 189 Meanwhile, farmers in New South Wales continue to lobby for such a right. 190 The government has adopted a “right-to-farm policy” to respond to these concerns and to address land use conflicts. 191

181 Primary Industries Activities Protection Act 1995 (Tas.) (Austl.).
182 Id. at s 5(1).
183 Id. at s 4(d).
184 Id. at s 3(1).
185 Id. at s 6.
186 Environmental Management and Pollution Control Act 1994 (Tas.) s 53(5)(b)(i) (Austl.); see also Griffith, supra note 177, at 11–12.
188 Protection of Agricultural Production (Right to Farm) Bill 2005 (N.S.W.) (Austl.); see also Griffith, supra note 177, at 13–15 (showing the similarity of the clauses used in the legislation).
189 Griffith, supra note 177, at 13.
In South Australia, member of the state legislative council Robert Brokenshire repeatedly proposed the adoption of US-inspired right-to-farm legislation.\(^{192}\) One of the stated goals of the bill is to “ensure that protected farming activities are not subject to civil or criminal liability under environmental legislation.”\(^{193}\) So far, none of Brokenshire’s proposals have been endorsed by the state parliament, but farmers are pushing for the right-to-farm to be recognized by the law.\(^{194}\)

Further steps have been taken in order to protect farmers’ rights in Australia. One example is the Intergovernmental Agreement on a National Water Initiative.\(^{195}\) This agreement—between the Commonwealth of Australia and the governments of the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, and Victoria—grants farmers a right to compensation when the amount of water they need to irrigate their fields is restricted by environmental policy.\(^{196}\) Moreover, farming lobbies have sought to obtain a statutory right to compensation for environmental measures. They have done so by drawing on the Inquiry Report published by the Australian government’s Productivity Commission in 2004.\(^{197}\) This report states:

> [T]he wider public should bear the costs of actions to promote public-good environmental services—such as biodiversity, threatened species preservation and greenhouse gas abatement—that it apparently

\(^{192}\) See GRIFFITH, supra note 177, at 16–18 (explaining the bill was also introduced in 2009, 2010, 2012, and 2015).

\(^{193}\) Right to Farm Bill 2012 (S. Austl.) ss 4–5 (Austl.).


\(^{196}\) See, e.g., id. at ¶ 50. But cf. MACINTOSH & DENNISS, supra note 180, at 2 (providing a critical appraisal of the intergovernmental agreement).

\(^{197}\) E.g., MACINTOSH & DENNISS, supra note 180, at 2. The Productivity Commission is an independent body advising the Australian government on a range of issues pertaining to industry. See Productivity Commission Act 1998 (Cth) (Austl.) (defining the functions of the Commission).
demands, and which are likely to impinge significantly on the capacity of landholders to utilise their land for production.\textsuperscript{198}

It is also important to stress that farmed animals are, in practice, excluded from the scope of Australian animal welfare legislation. Since the 1980s, the Australian states and territories have typically been regulating farmed animal welfare in codes. These codes are often based on Model Codes of Practice elaborated by federal and local industries ministers.\textsuperscript{199} Yet, Steven White notes that such codes are significantly less protective of animals than standard animal welfare legislation because farmers are among the issuers of the codes and they themselves are not legally obliged to comply with the codes.\textsuperscript{200} More generally, scholars highlight that the regulation of factory farming is hampered by lobbying efforts of the farming industry and conflicts of interest on the part of the regulators.\textsuperscript{201} A further issue is the use of indeterminate language, which leaves considerable discretion to decisionmakers and may serve the interests of the factory farming industry.\textsuperscript{202}

A contrary trend to these laws and legislative proposals consists in limiting farmers’ rights—or at least in not taking those rights for granted. Such a tendency is observed in the state of Victoria, where the Sales of Land Amendment Act 2014 provides that prospective purchasers of land must be given a due diligence checklist.\textsuperscript{203} The checklist recommends that potential buyers of land in a rural zone assess whether the “surrounding land use [is] compatible with [their] lifestyle expectations . . .”\textsuperscript{204}

\textsuperscript{198} \textit{PRODUCTIVITY COMM’N, IMPACTS OF NATIVE VEGETATION AND BIODIVERSITY REGULATIONS: PRODUCTIVITY COMMISSION INQUIRY REPORT NO. 29\textsuperscript{\textregistered} (Commonwealth of Austl. 2004), \url{https://www.pc.gov.au/__data/assets/pdf_file/0005/49235/nativevegetation.pdf}; MACINTOSH \& DENNISS, supra note 180, at 8.}

\textsuperscript{199} Arnja Dale, \textit{Animal Welfare Codes and Regulations–The Devil in Disguise?}, in \textit{ANIMAL LAW IN AUSTRALASIA} 174 (Peter White et al. eds., 2d ed. 2013).

\textsuperscript{200} Steven White, \textit{Regulation of Animal Welfare in Australia and the Emergent Commonwealth: Entrenching the Traditional Approach of the States and Territories or Laying the Ground for Reform?} 35 FED. L. REV. 347, 355 (2007); see also Bruce \& Faunce, supra note 174, at 381.


\textsuperscript{202} Ellis, supra note 201, at 8.

\textsuperscript{203} \textit{Sales of Land Amendment Act 2014 (Vic.)} s 5 (Austl.).

\textsuperscript{204} \textit{Due Diligence Checklist–for Home and Residential Property Buyers, CONSUMER AFFAIRS VICT.}, \url{https://www.consumer.vic.gov.au/duediligencechecklist} (last visited Nov. 26, 2019); see also \textit{Sales of Land Amendment Act 2014 (Vic.)} s 5 (Austl.); see
Notwithstanding, the Australian legal landscape paints an overall dreadful picture: the various measures and compensatory claims in place to protect farmers neglect to recognize that the environment is a public good. This is all the more worrisome given Australian farmers’ intent to further intensify their production to meet an ever-growing global demand (especially in Asia) for animal products. Another obstacle is the multilayered and fragmented character of the Australian regulatory framework pertaining to animals.

### D. European Union

In contrast to the other jurisdictions under scrutiny in this paper, right-to-farm legislation is, by and large, foreign to EU law. One important explanation for this is that agriculture and fisheries are a shared competence between the EU and its member states, and the EU can only act pursuant to the principle of conferral. Moreover, when comparing agricultural policies in and outside the EU, and more generally across states, one component to factor in is the demand for environmental regulation tailored to the characteristics of the agriculture of one state or group of states. The present subsection examines how EU law regulates the activity of CAFOs. It focuses on the EU’s Common Agricultural Policy (CAP), which represents a substantial share of the EU budget. It also examines EU laws on animal welfare, which apply to animals in CAFOs.

The CAP, the establishment of which dates back to the Treaty of Rome, has undergone various changes since the late

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*Bruce & Faunce, supra note 174, at 366.*

*Id. at 389.*


*For instance, Rajsic et al. note that “the demand for agricultural environmental regulation in countries like the Netherlands and Belgium might be much more intense than would be the case in relatively low nutrient intensity agricultures like Australia, Argentina and Canada.” Rajsic et al., supra note 157, at 61.*

*See Reform of the Common Agricultural Policy Post 2013, EUROPEAN COUNCIL, https://www.consilium.europa.eu/en/policies/cap-reform/# (last visited Nov. 25, 2019) (noting that the CAP policy for 2014-2020 takes up 38% of the EU’s overall budget, but that the percentage should drop over the next few years).*
Initially, reforms were primarily aimed at improving the economic efficiency of farming—for instance, by encouraging large-scale agriculture. More recently, the CAP has shifted to incorporate non-economic concerns, including health, social concerns, animal welfare, and environmental considerations. One important reform occurred in 2003 with the adoption of the Single Payment Scheme (granting direct payments to farmers) and the decoupling of subsidies from the types (and quantities) of crops produced. Instead, payments became contingent on farmers complying with specific environmental, animal welfare, and food safety standards (this process is known as “cross-compliance”).

The last reform of the CAP entered into force in 2014 and covers the period of 2014-2020. It provides for the so-called “greening” of farm payments, i.e., the financial encouragement of agricultural businesses that are “beneficial for the climate and the environment.” It also seeks to reduce inequalities between small-scale and large-scale farming, e.g., by introducing a cap on subsidies for farms exceeding a specific size.

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214 Id. at 34.

215 Id. at 32.

216 EUROPEAN COUNCIL, supra note 210.


218 Regulation 1307/2013, supra note 217, at art. 11(1).
The CAP has been criticized on several counts. With respect to the 2014 amendments, Diane Ryland notes that “[t]he reformed CAP instruments are disappointing in that they do not aim explicitly and directly to improve farm animal welfare.” Others criticize the fact that the CAP leads to deforestation and other types of environmental degradation, or that it does not sufficiently support small-scale farming. Another point is that the CAP does not prohibit specific practices. Instead, it merely creates incentives for farmers to conform to specific environmental and animal welfare standards.

In 2018, the EU Commission published regulatory proposals to “modernize and simplify” the CAP for 2021-2027. The budget proposed for this period is expected to represent close to one-third of the total EU budget. The Commission’s proposal moves away from a “one-size-fits-all” approach to a more flexible scheme, allowing Members States to better account for local specificities. It puts greater emphasis on environmental goals and on fighting climate change. Through the new CAP, the Commission also seeks to encourage “small and medium sized family farms.” At the time of writing, the EU institutions were debating the new CAP. The extent to which the proposal will be accepted and implemented remains to be seen.

Several EU legal instruments deal with animal welfare in CAFOs. One example is the Directive 98/58/EC, which regulates

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222 Epstein, supra note 213, at 20.
225 Id. at 1.
226 Id. at 1.
227 Id. at 3.
the protection of animals kept for farming purposes. The Directive in a general manner states that the EU Members States “shall ensure that the conditions under which animals . . . are bred or kept, having regard to their species and to their degree of development, adaptation and domestication, and to their physiological and ethological needs in accordance with established experience and scientific knowledge, comply with the provisions set out in the Annex.”

The Directive has been subject of extensive literature, which we do not want to replicate here. It suffices to note that the Directive “cleaned up around the edges,” but by and large failed to change the status quo, namely that animals are industrially produced and killed by the billions. Moreover, the Directive does not deal with other externalities caused by CAFOs, such as their effects on the environment or human rights affected by their operation.

EU norms on organic farming address some concerns relating to animal welfare. Regulation 834/2007 on Organic Production and Labelling of Organic Products defines organic production as:

[A]n overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards[, and] a production method in line with the preference of certain consumers for products produced using natural substances and processes.

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230 Id. art. 4.
Yet, these norms only aim at regulating organic production and labelling; they do not impose mandatory standards on all farmers.

IV. How Farmers’ Rights Threaten Human Rights Guarantees

In this section, we examine how farmers’ rights (rather than agriculture itself), including right-to-farm laws and other legislation exempting animal agribusiness, threaten and even violate human rights. For reasons of scope, we limit our analysis to five rights: the right to food (Part A), the right to water and sanitation (Part B), the right to a safe environment (Part C), the emerging right to land (Part D), and the right to animal protection (Part E). However, it is important to note that many other human rights, such as the right to privacy, home, and family life, may be affected by these laws as well.

A. Right to Food

The right to food has been described as one of “the least realized human rights” and even as “the most violated human right worldwide.” It is rejected by major global players such as the US and deemed non-justiciable by states such as Canada. While European states tend to support the right to food abroad, they are much more cautious to implement this right within their own jurisdiction. Moreover, as highlighted by the Office of the High Commissioner for Human Rights (OHCHR), the right to food is often misunderstood. Yet the right to food is protected by the Universal Declaration of Human Rights (UDHR) and guaranteed by various

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240 Jose Luis Vivero Pol & Claudio Schultan, *No Right to Food and Nutrition in the SDGs: Mistake or Success?*, 1 BMJ GLOBAL HEALTH 1, 3 (2016).

241 See Fact Sheet No. 34, *supra* note 18, at 3.

international human rights treaties, including the International Covenant on Economic, Social, and Cultural Rights (ICESCR), the Convention on the Rights of the Child (CRC), the Convention on the Elimination of All Form of Discrimination Against Women (CEDAW), and the Convention on the Rights of Persons With Disabilities (CRPD). Many of the UN human rights treaty bodies have dealt with this right, and the Human Rights Council has called upon states to protect it. Scholars endorse the right to food as well. Some commentators point to several UN General Assembly resolutions that acknowledge the existence of the right to food to argue that this right has the status of customary international law, and the OHCHR considers that “at least freedom from hunger can be considered as a norm of international customary law.” All in all, human rights lawyers converge in saying that the right to food is one of the most fundamental human rights.

Article 11 ICESCR, upon which we focus in this subsection, “deals more comprehensively” with this right in international law. It states that the parties to the Covenant “recognize the right of everyone to . . . adequate food.” Moreover, it provides that states commit to “improve methods of production . . . of food,” inter alia

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244 We do not focus on the right to be free from hunger, which is also guaranteed by the ICESCR. ICESCR, supra note 238, art. 11(2).


248 See Fact Sheet No. 34, supra note 18, at 34–35.


250 Ana Ayala & Benjamin Mason Meier, A Human Rights Approach to the Health Implications of Food & Nutrition Insecurity, 38 PUB. HEALTH REV. 1 (2017); Vivero Pol & Schuftan, supra note 240, at 1; Garrow & Day, supra note 238, at 275; Naomi Hossain & Dolf te Lintelo, A Common Sense Approach to the Right to Food, 10 J. HUM. RTS. PRAC. 367 (2018) (discussing how an understanding of the right to food is shared across different cultures).


252 Mechlem, supra note 236, at 13.

253 See Fact Sheet No. 34, supra note 18, at 9.


256 ICESCR, supra note 238, art. 11(1).
“by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilization of natural resources.” Pursuant to article 2(1) ICESCR, states have a duty of progressive realization with respect to this right. They cannot discriminate against specific groups of individuals when giving effect to the right to food (article 2(2) ICESCR), nor can they take so-called retrogressive measures impairing its realization.

It is widely held that agriculture is necessary to realize the right to food. On this basis, one could consider that guaranteeing the right to food requires maintaining and further developing existing agricultural practices, including industrial animal agriculture businesses. However, several arguments show that this assumption is treacherous and actually prevents states from complying with their duty to respect, protect, and fulfill the right to food. As the UN Committee on Economic, Social, and Cultural Rights has stressed, the concepts of adequacy, sustainability, availability, and accessibility are central to the right to food. For our purposes, adequacy and sustainability are particularly important.

In regards to adequacy, the UN Committee on Economic, Social, and Cultural Rights has noted:

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257 Id. at art. 11(2).
258 Id. at art. 2(1).
261 See, e.g., Mechlem, supra note 236, at 19; see also HENRY SHUE, BASIC RIGHTS: SUBSISTENCE, AFFLUENCE, AND US FOREIGN POLICY (Princeton Univ. Press 1980).
263 However, other aspects are relevant as well, considering that the UN Committee on Economic, Social, and Cultural Rights has stated that the “roots of the problem of hunger and malnutrition are not lack of food but lack of access to available food.” Meat production, in particular, deprives individuals from crops and other plant-based food because these products are fed to animals in large quantities rather than being directly used to feed local populations. See General Comment 12, supra note 255, ¶ 5.
[T]he right to adequate food implies: [t]he availability of food in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture; [t]he accessibility of such food in ways that are sustainable and that do not interfere with the enjoyment of other human rights.\textsuperscript{264} It has further stated that the meaning of adequacy is “to a large extent determined by prevailing social, economic, cultural, climatic, ecological and other conditions.”\textsuperscript{265} As previously stated in the introductory section,\textsuperscript{266} the prevailing animal agricultural production methods (CAFOs) create massive negative externalities from an environmental perspective, which puts into question their adequacy as a means to guarantee the right to food.

Similarly, sustainability, which can be defined as the accessibility of food for both present and future generations,\textsuperscript{267} supports abandoning agricultural products that are major drivers of climate change and that jeopardize food security.\textsuperscript{268} It has been shown, in this context, that meat production consumes particularly large amounts of resources (e.g., water, energy, and land) compared to plant-based diets. For instance, the production of 1 kg of beef meat consumes over 15,400 liters of water.\textsuperscript{269} The water footprint of the same quantity (1 kg) of rice consumes 2,497 liters; 1 kg of cereals uses 1,644 liters; and 1 kg of potatoes requires 287 liters.\textsuperscript{270} Because

\textsuperscript{264} Id. ¶ 8.
\textsuperscript{265} Id. ¶ 7.
\textsuperscript{266} See supra Part I.
\textsuperscript{267} See General Comment 12, supra note 255, ¶ 7.
\textsuperscript{268} See U.N. Doc. A/70/287, supra note 262, ¶ 41.
\textsuperscript{270} WATER FOOTPRINT NETWORK, supra note 269; see also THE GUARDIAN, supra note 269. The Water Footprint Network is a non-profit organization which, to date, constitutes the main source of information in terms of the water used to produce various goods. See also Global Water Footprint Standard, WATER FOOTPRINT NETWORK, https://waterfootprint.org/en/water-footprint/global-water-footprint-standard/ (last visited Dec. 15, 2019) (providing the methodology used in this context). While some methodological concerns remain, the water footprint standard is widely
meat-based diets are so nutritionally inefficient and unsustainable, animal agricultural production greatly inhibits states’ ability to ensure food security in the long term. As Alex Bruce and Thomas Faunce put it, animal farming has a highly damaging “environmental domino effect.”

Civil society actors are increasingly highlighting that a rational solution to world hunger would consist of shifting toward a plant-based diet. A report of the UN Environmental Programme published in 2010 reached the same conclusion, stating:

Impacts from agriculture are expected to increase substantially due to population growth increasing consumption of animal products. Unlike fossil fuels, it is difficult to look for alternatives: people have to eat. A substantial reduction of impacts would only be possible with a substantial worldwide diet change, away from animal products.

Despite compelling evidence regarding the environmental and human rights benefits of a plant-based diet, the UN Special Rapporteurs on the right to food have thus far refrained from explicitly describing an adequate diet as primarily plant-based—or even as based on the consumption of little meat. This omission might be owed to political and strategic reasons given that the Rapporteurs readily highlight the health benefits of consuming fruit and vegetables and that they stress the health and other (including food-supply) problems created by increasing meat consumption. The Rapporteurs have also pointed to the negative nutritional effects of industrial food, which is typically the product of factory


Bruce & Faunce, supra note 174, at 385.


farming, and they have recommended shifting away from this type of industrial agricultural production. They have further emphasized states’ obligation to respect farmers’ right to food. However, instead of advocating for changing food habits, the UN Special Rapporteurs have primarily recommended relying on agroecology as an alternative to industrial agriculture. They have stressed that article 11 ICESCR calls for small-scale farming in light of the benefits that this type of farming generates, e.g., in terms of employment, sustainability, and non-discrimination of vulnerable populations.

As scholars note, “[a] strong linkage exists between the right to food, sustainable agriculture, and sustainable soil management.” Goal 2 of the UN’s 2030 Agenda for Sustainable Development states that the UN members undertake to “end hunger, achieve food security and improved nutrition[,] and promote sustainable agriculture.” Similarly, the FAO recommends that “[s]tates should assist farmers and other primary producers to follow good agricultural practices,” so as to ensure the progressive realization of the right to adequate food.

In view of the aforementioned observations, however, profound reforms of current agricultural practices, and especially of factory farming, appear necessary to guarantee the right to food.

278 Id.
Indeed, “[i]ndustrial agriculture and fishing practices encourage the waste of natural capital, such as soil, and violate the human right-to-food.”284 By contrast, plant-based diets “could play an important role in preserving environmental resources and reducing hunger and malnutrition in poorer nations.”285 This issue needs to be addressed urgently, not least because of the steady growth of the global human population and its reliance (and dependence) on finite resources.

B. Right to Water and Sanitation

The CEDAW, adopted in 1979, is the first international human rights treaty to have mentioned the right to water and sanitation.286 Since then, other treaties have included this right in their text.287 In 2002, the UN Committee on Economic, Social, and Cultural Rights stated that this right is contained in article 11 ICESCR, which protects “the right to an adequate standard of living . . . including adequate food, clothing and housing.”288 Moreover, the Committee deems the right to water and sanitation “inextricably related”289 to article 12(1) ICESCR (which guarantees the right to health),290 article 11(1) ICESCR (which protects the right to housing and the right to food),291 and the right to life.292 Later, in 2010, the UN Human Rights Council reaffirmed these statements293 a few months after the UN General Assembly had recognized the human

284 Telesetsky, supra note 279, at 803.
286 CEDAW, supra note 246, art. 14(2)(h).
287 CRC, supra note 245, arts. 24, 27(3); CRPD, supra note 247, art. 28.
290 General Comment 15, supra note 288, ¶ 3.
293 HRC Res. 15/9, supra note 289, ¶ 3.
right to water and sanitation.294 Goal 6 of the UN’s Sustainable Development Goals is to “[e]nsure availability and sustainable management of water and sanitation for all.”295 However, among states and international lawyers, this right remains controversial,296 and it is not deemed part of customary international law.297 Researchers have highlighted “the complex interplay of interests behind the recognition of the right to water.”298 This explains why the right to water and sanitation has been pictured as a right requiring further development and institutionalization.299

Given that the right to water is “inextricably related” to the right to food, it comes as no surprise that agricultural practices can threaten this right as well. As a matter of fact, agriculture currently consumes, on average, 70% of the water used worldwide.300 Animal agriculture absorbs a large share of this portion, since meat-based diets require particularly high amounts of water compared to plant-based diets.301 For instance, in California, agriculture draws more than 90% of the total water, with animal agriculture consuming 47%.302 The substantial water depletion caused by animal agriculture jeopardizes water security, which is currently under high

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295 G.A. Res. 70/1, supra note 282, at 14.
threat across the world.\textsuperscript{303} While California was the first US state to recognize the human right to water (in 2012),\textsuperscript{304} the implementation of this right has been incomplete.\textsuperscript{305}

The FAO\textsuperscript{306} and the UN Special Rapporteurs on the Human Rights to Safe Drinking Water and Sanitation\textsuperscript{307} have also highlighted the link between agriculture and environmental pollution—more specifically, water pollution.\textsuperscript{308} Animal agriculture pollutes water to a disproportionate extent compared to the production of plant-based food,\textsuperscript{309} notably through animal excrements, antibiotics, hormones, fertilizers, and pesticides for fodder cultivation.\textsuperscript{310} In the US, for instance, animal agriculture is responsible for 37% of all pesticides applied and 50% of all antibiotics consumed,\textsuperscript{311} which run off into ground and fresh water reserves.\textsuperscript{312} The FAO succinctly summarizes that “the livestock sector has an enormous impact on water use, water quality, hydrology and aquatic ecosystems.”\textsuperscript{313}

With animal agriculture resulting in water depletion, large investments in animal agriculture jeopardize the human right to water. This right, according to the UN Committee on Economic, Social, and Cultural Rights, requires that water be “sufficient, safe, acceptable, physically accessible, and affordable . . .”\textsuperscript{314}

\textsuperscript{303} C. J. Vörösmarty et al., Rivers in Crisis: “Global Water Insecurity for Humans and Biodiversity,” 467 NATURE 555 (2010).
\textsuperscript{304} CAL. WAT. CODE § 106.3(a) (West 2013).
\textsuperscript{306} E.g., FOOD & AGRIC. ORG., supra note 300, 43–46.
\textsuperscript{307} The initial denomination (for 2008-2014) was that of “Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation.” This expert was appointed by the Human Rights Council in 2008. See Human Rights Council Res. 7/22, ¶ 2 (Mar. 28, 2008). The mandate was extended and transformed into that of a Special Rapporteur in 2011. See HRC Res. 16/2 (Apr. 8, 2011).
\textsuperscript{308} U.N. Doc. A/68/264, supra note 300, ¶ 35.
\textsuperscript{309} Leo Horrigan et al., How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture, 110 ENVTL. HEALTH PERSP. 445, 445–49 (2002); Margot J. Pollans, Regulating Farming: Balancing Food Safety and Environmental Protection in a Cooperative Governance Scheme, 50 WAKE FOREST L. REV. 399, 404 (2015); see also FOOD & AGRIC. ORG., supra note 33, at 125–32.
\textsuperscript{310} Ernährung, supra note 272.
\textsuperscript{311} FOOD & AGRIC. ORG., supra note 33, at 168.
\textsuperscript{312} Id. at 137–39, 142–43, 145.
\textsuperscript{313} Id. at 167.
\textsuperscript{314} General Comment 15, supra note 288, ¶ 2 (although these terms are sometimes replaced by synonyms or by related adjectives).
arise with regard to the criterion of safety, which requires that water be “free from micro-organisms, chemical substances and radiological hazards that constitute a threat to a person’s health.”

Of course, when water is accessible to factory farmers to the detriment of local populations, the criteria of sufficiency, physical accessibility, and affordability are likely to be undermined as well. The same problems arise when water is driven away from local populations to meet the needs of meat production. The end product is mostly consumed by individuals living in rich, minority world countries. In the US, for instance, the standard food diet requires 4,200 gallons (15,899 liters) of water per day, while a person on a vegan food diet only needs 300 gallons (1,136 liters) of water per day. What is more, when water is lacking, other human rights can be affected. For instance, inadequate access to water has a disparate impact on women and girls. Instead of investing water resources into an unsustainable system that accounts for adverse and discriminatory effects, these resources could be used for direct consumption and thereby make it more likely for the human right to water of local and foreign populations to be guaranteed.

C. Right to a Safe Environment

The strong link between human rights and the environment became salient at latest in 1972, when the Stockholm Conference on the Human Environment issued a declaration that recognized a quality environment as a precondition for “a life of dignity and well-being.” As political and civil society actors increasingly recognized environmental protection as essential for the enjoyment of the right to life, health, home life, and property, calls for a right

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315 Id. ¶ 12(b).


to a safe environment became stronger, both nationally and internationally.\textsuperscript{321}

Today, over one hundred constitutions worldwide—adopted since 1992—enshrine the right to a clean and healthy environment.\textsuperscript{322} For example, Section 20(2) of the Finnish constitution recognizes “. . . the right to a healthy environment and for everyone the possibility to influence the decisions that concern their own living environment.”\textsuperscript{323} More than one hundred states incorporated an explicit right to a healthy environment in domestic environmental legislation, totaling 155 states that are obligated to respect, protect, and fulfill the right to a healthy environment under domestic law.\textsuperscript{324} On the international level, the African Charter for Human and Peoples’ Rights\textsuperscript{325} and the Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights\textsuperscript{326} both provide for a human right to a healthy environment. General Comment No. 14 to article 12 of the ICCPR (which guarantees the right to the highest attainable standard of health) stipulates that “the right to health embraces a wide range of socio-


\textsuperscript{323} SUOMEN PERUSTUSLAKI, [CONSTITUTION], June 11, 1999, 731, § 20 (Fin.).


\textsuperscript{325} African Charter on Human and Peoples Rights, art. 24, June 27, 1981, 21 I.L.M. 58 [hereinafter African Charter on Human and People’s Rights] (“All peoples shall have the right to a general satisfactory environment favourable to their development.”).

\textsuperscript{326} Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights “Protocol San Salvador” art. 11, Nov. 17, 1988, O.A.S.T.S. No. 69, 28 I.L.M. 164 (stating that “everyone shall have the right to live in a healthy environment . . . ”).
economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinates of health, such as . . . a healthy environment.” 327 In 2003, the Council of Europe’s Parliamentary Assembly issued a recommendation for the governments of the member states of the Council of Europe to “recognize a human right to a healthy, viable and decent environment.” 328 The European Convention on Human Rights (ECHR) 329 does not expressly provide for a right to a healthy environment, but it covers those instances in which an unsafe environment threatens people’s right to life (article 2 ECHR), the right to privacy and family life (article 8 ECHR) and, in the ECHR’s Protocol No. 1, the right to property (article 1). 330

Though widely recognized domestically and internationally, the content of the right to a healthy environment is still in dispute. Some scholars argue for a broad definition of the right, namely as a right to a safe, healthy, secure, clean, sustainable, or ecologically-balanced environment, 331 as enshrined in the constitutions of Honduras, 332 Portugal, 333 or South Korea. 334 Another camp argues for a narrower interpretation of this right, i.e., for guaranteeing the right to a safe environment. 335 In this view, environments must not

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331 Thorme, supra note 320, at 310 (1991); see also Shelton, supra note 320, at 265.

332 See República de Honduras CONSTITUCIÓN DE 1982 CON REFORMAS HASTA 2019 [CONSTITUTION], Jan. 29, 2019, art. 145 (Hond.) (mentioning “an adequate environment to protect the health of persons”).

333 See CONSTITUCIÓN DE LA REPÚBLICA PORTUGUESA [CONSTITUTION], Apr. 2, 1976, art. 66, ¶ 1 (Port.) (mentioning the right to “a healthy and ecologically balanced human living environment”).

334 See 대한민국 헌법 [CONSTITUTION], Oct. 29, 1987, art. 35 (S. Kor.) (mentioning the right to “a healthy and pleasant environment”).

335 Nickel, supra note 321, at 281–82. Scholars argue that, in the environmental domain, it is more appropriate to appeal to obligations and responsibilities towards the environment, or to the respect of environmental goods. See Cynthia Giagnocavo
be destructive to human health and must provide protection from contamination and pollution. Activities that cause adverse environmental effects but do not manifest a damage or threat to human health, such as noises emanating from nearby farms, are not covered by this narrower, anthropocentric reading. Critics question what such a narrow right adds to existing human rights, such as the right to life or the right to property, and denounce a “rights inflation”—dangers of “policy and resource overload” that may occur because of too many human rights enunciations. In the following, we examine the right to an environment through the narrower lens, due to the fact that this perspective seems to more closely follow the current state of international law, and because it acknowledges the close connection between human rights and the environment. After all, the environment is the physical basis, the sine qua non, without which there are no human rights to enjoy or protect, as famously stated by Judge Weeramantry in his separate opinion to the Gabčikovo-Nagymaros judgment of the International Court of Justice.

The right to environmental protection only imposes a duty on natural and legal persons to refrain from activities that damage or threaten the environment to the determined extent (i.e., when these activities threaten human safety), and to restore damage and pay compensation to those affected. Governments, in contrast, are “obligated to respect, protect, and fulfill the right to a healthy environment,” as the UN Special Rapporteur on Human Rights and the Environment, David R. Boyd, noted in a report unanimously adopted by the UN General Assembly in January 2019. States have both a “negative duty to refrain from actions . . . [threatening] human life and health,” and a positive “duty to protect the inhabitants of their territories against environmental risks . . . [caused] by

336 Nickel, supra note 321, at 284.
337 Non-anthropocentric values, such as “duties toward the environment” and “rights of nature,” are protected by the Earth Charter and numerous international environmental law treaties. Shelton, supra note 322, at 131–32.
338 Nickel, supra note 321, at 285.
340 Gabčikovo-Nagymaros Project (Hung. v. Slovk.), Separate Opinion of Judge Weeramantry, 1997 I.C.J. 7, at 91 (Sept. 25) (“The protection of the environment is . . . a sine qua non for numerous human rights such as the right to health and the right to life itself.”).
341 Nickel, supra note 321, at 286.
governments or private agencies.” 343 The duty to protect more specifically calls on governments to prevent, investigate, and prosecute violations as well as to provide appropriate redress. 344 The right to environmental protection also encompasses procedural duties, such as the duty to allow individuals to sue polluters, participate in the formation of environmental laws, and access information. 345 In this scheme, international law does not directly enable victims to sue private enterprises; only states can be held accountable for failure to do so and for the resulting harm. 346 So far, claims that the human right to a safe environment is threatened or violated have mostly been raised against oil and logging industries. 347

The consumption of meat and milk products has for years been marketed as beneficial to human health and even as an indicator

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343 Nickel, supra note 321, at 286.
344 Shelton, supra note 322, at 130.
346 Shelton, supra note 322, at 130.
of the prosperity of a civilized nation.\textsuperscript{348} This framing, pushed by corporate lobbying,\textsuperscript{349} largely ignores the human health costs of animal agriculture. As CAFOs become larger and more intensified, there is a rising awareness of the fact that emissions of excessive nitrates cause blue baby syndrome, affect the development of the central nervous system, and lead to miscarriages.\textsuperscript{350} Hydrogen sulfide is associated with mild cerebral dysfunction and brain damage for people living close to CAFOs.\textsuperscript{351} Asthma, chronic bronchitis, declining lung functions, cardiovascular irritation, headaches, and even brain damage and death have been observed due to the exposure of CAFO workers and their families to hydrogen sulfide, ammonia, and dust.\textsuperscript{352} People living near CAFOs have been reported to suffer from increased levels of depression, anxiety, and sleep disturbances.\textsuperscript{353} Surroundings of CAFOs are also increasingly exposed to pathogen outbreaks, including bacteria, fungi, viruses, helminths (parasitic worms), and protozoa.\textsuperscript{354} The high toxicity of CAFOs becomes evident with the example of Mexico: due to animal waste and fertilizer runoff, there is a now a dead zone of 20,000 km\textsuperscript{2} with no marine life in the Gulf of Mexico.\textsuperscript{355} The multi-level contamination of water, air, and soil by CAFOs directly and fundamentally threatens people’s health and life.

Because they continue to subsidize and even to immunize CAFOs from environmental responsibility, governments can and should be held accountable for violating their duty to refrain from

\textsuperscript{348} After the postwar period, milk and other animal products were identified as products of wealth and economic growth. See Anne Mendelson, \textit{Milk: The Surprising Story of Milk Through the Ages} 45 (2008).


\textsuperscript{350} Wilson, supra note 32, at 445 & n. 45 (discussing ammonia emissions from animal agriculture and studies of the effects of such emissions in North Carolina and Iowa); Brehm, supra note 32, at 813–14; Marc B. Schenker et al., \textit{Respiratory Health Hazards in Agriculture}, 158 AM. J. RESPIRATORY & CRITICAL CARE MED. S1, S2 (1998).

\textsuperscript{351} Brehm, supra note 32, at 814.

\textsuperscript{352} Id.; Wilson, supra note 32, at 446.


damaging human life and health, as well as for their failure to fulfill their duty to protect people from harm to life and health caused by third parties (i.e., animal agribusinesses). As Shelton argues, “there may be little difference between a state that arbitrarily executes persons and a state that knowingly allows drinking water to be poisoned by contaminants.”

D. Right to Land

The right to land, or land rights, can be defined as “rights to use, control, and transfer a parcel of land.” Some voices, including land rights movements within civil society, have called for the recognition of such a right in international human rights law. One such voice is that of Miloon Kothari, the former UN Special Rapporteur on adequate housing. Olivier de Schutter, the former Special Rapporteur on the right to food, even speaks of an “emerging human right to land.”

Together with food sovereignty claims, the legal recognition of the right to land is one of the main concerns of the transnational movement La Via Campesina, composed of farmers and members of rural and indigenous populations. The movement emerged in response to the growing commodification of land and to the large-scale acquisitions of land by corporate actors over the past decades. Presently, the right to land is not explicitly recognized as a self-standing human right in international human rights law; land is only mentioned at the margins or via related concepts, such as property or housing.

356 Shelton, supra note 322, at 171.
361 De Schutter, supra note 27, at 303.
363 Claeys, supra note 358, at 117.
364 Id. at 116–17.
365 E.g., CEDAW, supra note 246, art. 14.
366 E.g., UDHR, supra note 242, art. 17.
367 E.g., ICESCR, supra note 238, art. 11(1).
Why talk about land if no corresponding right exists in contemporary international law? Simply because it is widely accepted that access to land is key to the realization of other human rights.\(^{368}\) As a matter of fact, land rights are present in several ways in international human rights law.\(^{369}\) In a report published in 2014, the UN High Commissioner for Human Rights noted that land issues, including large-scale agriculture, affect a variety of human rights, namely the right to self-determination, non-discrimination and equality, the right to life, the right to an adequate standard of living (including food, housing, and water), freedom from hunger, the right to an effective judicial remedy, freedom of opinion, expression, assembly and association, and the right to take part in public affairs.\(^{370}\) Following a number of scholars,\(^{371}\) the Commissioner has advocated viewing land issues through a human rights lens.\(^{372}\)

Right-to-farm laws and exemptions for animal agricultural industries greatly threaten the (emerging) human right to land. In 2014, agriculture took up 36.99% of all available land.\(^{373}\) Meat-

\(^{368}\) E.g., Gilbert, supra note 357, at 115; see also Land and Human Rights, UNITED NATIONS HUM. RTS. OFF. OF THE HIGH COMMISSIONER, http://www.ohchr.org/EN/Issues/LandAndHR/Pages/LandandHumanRightsIndex.aspx (last visited Oct. 14, 2019) [hereinafter Land and Human Rights].

\(^{369}\) Gilbert, supra note 357, at 115 (mentioning property law, the protection of indigenous peoples, the right to food, and housing); see UDHR, supra note 242, arts. 15, 25; see International Convention on the Elimination of All Forms of Racial Discrimination, art. 5, Mar. 7, 1966, 660 U.N.T.S. 195; see CEDAW, supra note 246, arts. 14(2)(h), 16; see ICCPR, supra note 345, art. 27; see ICESCR, supra note 238, art. 11; see CRC, supra note 245, art. 27(3); see also U.N. Comm. on Econ., Soc. and Cultural Rights, General Comment No. 4: The Right to Adequate Housing, art. 11(1), U.N. Doc. E/1992/23 (Dec. 13, 1991); U.N. Comm. on Econ., Soc. and Cultural Rights, General Comment No. 7: The Right to Adequate Housing: Forced Evictions, art. 11.1, U.N. Doc. E/1998/22 (May 20, 1997).


\(^{371}\) E.g., Gilbert, supra note 357, at 115; De Schutter, supra note 27, at 303.


\(^{373}\) Land Use Statistical Data, FOOD & AGRIC. ORG., http://www.fao.org/faostat/en/#data (last visited Dec. 21, 2019) (follow “Land Use Indicators” hyperlink under “Agri-Environmental Indicators” heading; select “World + (Total)” under
based nutrition requires significantly more land than plant-based nutrition. According to the FAO, the livestock sector uses 78% of all agricultural land and 33% of all cropland. More specifically, a study conducted in the Netherlands for the year 1990 has shown that meat production required 57.9 m² of land per kg (with beef meat requiring 20.9 m²/kg), while the total production of cereals, sugar, potatoes, vegetables, and fruit required only 3.8 m² of land per kg (over fifteen times less). To satisfy the demand for meat, many minority world countries today need more land than the surface that is available domestically. For instance, between 2008 and 2010, the EU used a surface of almost fifteen million hectares of land, thirteen of which were located in South America.

These developments do not necessarily lead to investment relationships from which all parties benefit. As a matter of fact, these global “land grab policies” often lead to dire conflicts as arable land is taken away from populations in the Global South, who simultaneously bear the environmental and human rights externalities of meat production. In South America, for example, approximately four million hectares of forest are disappearing every year, mainly due to the spread of agricultural activity. CAFOs also threaten grasslands, which are frequently replaced by monoculture production. Given the continuous growth of the world population and the steady increase in meat consumption, these issues will only become more severe in the future.

The use of land for the purpose of animal agriculture affects individuals and their environment in a myriad of ways: it accelerates climate change and it leads to the pollution of water and soil, land degradation, and water depletion. Intensive animal agriculture

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374 FOOD & AGRIC. ORG., supra note 33, at 74.
375 Id.
377 WITZKE, NOLEPPA & ZHIRKOVA, supra note 273, at 6.
378 Id. at 7.
379 Id. at 17.
380 FOOD & AGRIC. ORG., supra note 33, at 34–35.
381 WITZKE, NOLEPPA & ZHIRKOVA, supra note 273, at 15–17 (discussing the increasing consumption of meat in Germany in recent years).
382 In the US, for example, livestock is estimated to be responsible for 55% of soil erosion on agricultural land. FOOD & AGRIC. ORG., supra note 33, at 73.
also catalyzes soil acidification, notably because of the fertilizers on which it relies.\textsuperscript{383} The appropriation of land to meet the demands of agriculture can threaten specific human rights, such as the right to housing when the demand for land triggers forced evictions and displacements.\textsuperscript{384} The environmental and human rights side effects of animal agriculture are particularly palpable for specially vulnerable groups, such as indigenous communities.\textsuperscript{385}

Land issues related to factory farming have major consequences for the right to food. The UN Special Rapporteur has frequently stressed that access to land is a prerequisite for realizing the right to food.\textsuperscript{386} It emerges from de Schutter’s analysis that factory farming increases the poverty (and hence jeopardizes the right to food) of small-scale farmers, but also of agricultural workers on large farms.\textsuperscript{387} Addressing these issues requires reforming agricultural policy to ensure an equal distribution of land and security of tenure.\textsuperscript{388} Moreover, given the high impact of animal agriculture on these rights, the relevant policies need to be designed based on a holistic approach so as to take into account the interlinkage between CAFO production, land use, and the enjoyment of human rights.


\textsuperscript{386} See U.N. Doc. A/57/356, supra note 260; see also U.N. Doc. A/65/281, supra note 280, ¶ 27 (discussing access to land and the right to food); Olivier de Schutter (Special Rapporteur on the Right to Food), Rep. of the Special Rapporteur on the Right to Food, Addendum on Large-Scale Acquisitions and Leases: A Set of Minimum Principles and Measures to Address the Human Rights Challenge, U.N. Doc. A/HRC/13/33/Add.2 (Dec. 28, 2009). De Schutter argues that access to land is sometimes a self-standing right and sometimes instrumental to the right to food. See De Schutter, supra note 27.


The importance of ensuring security of land tenure has, for example, been mentioned by the FAO. See FOOD & AGRIC. ORG., VOLUNTARY GUIDELINES ON THE PROGRESSIVE REALIZATION OF THE RIGHT TO ADEQUATE FOOD IN THE CONTEXT OF NATIONAL FOOD SECURITY 17 (2005) (referring to Guideline 8B).
E. Right to Animal Protection

Today, many animal protection and animal welfare acts throughout the world recognize animals as sentient, living beings, whom we owe moral and legal duties. These laws provide that animals ought not to be treated inhumanely or caused unnecessary suffering. This “general principle of animal welfare” is established law in, among others, the following countries and supranational or international organizations: the EU, the Council of Europe, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Costa Rica, Croatia, Estonia, Fiji, Finland, France, Germany, Gibraltar, Greece, Hong Kong, Iceland, India, Indonesia, Israel, Kenya, Latvia, Liechtenstein, Lithuania, Malaysia, Malta, Myanmar, the Netherlands, New Zealand, Nicaragua, Nigeria, Norway, Papua New Guinea, Paraguay, the Philippines, Poland, Portugal, Puerto Rico, Slovenia, Solomon Islands, South Africa, South Korea, Sri Lanka, Sweden, Switzerland, Taiwan, Tanzania, Tonga, Turkey, Uganda, Ukraine, the UK, the US, Vanuatu, Venezuela, and Zambia. In addition, more and more states (such as Brazil, Egypt, Germany, India, Luxemburg, and Switzerland) have expressed their concern for animals at a constitutional level, including by setting up duties owed to animals. These provisions make an important value statement about the claims of animals against us and


391 Article 225 paragraph 1 VII of the Brazilian Constitution states that it is “the responsibility of the Government to . . . prohibiting, as provided by law, all practices that . . . subject animals to cruelty.” CONSTITUIÇÃO DA REPÚBLICA FEDERATIVA DO BRASIL [C.F.] [Constitution] Oct. 5, 1988, art. 225, para. 1(IV) (Braz.). Article 45 of the Egyptian Constitution commits the state to “the protection of plants, livestock and fisheries; the protection of endangered species; and the prevention of cruelty to animals.” CONSTITUTION OF THE ARAB REPUBLIC OF EGYPT [CONSTITUTION] Jan. 15, 2014, art. 45 (Egypt); see also Egypt’s Constitution of 2014, Int’l IDEA, https://www.constituteproject.org/constitution/Egypt_2014.pdf (last updated Dec. 4, 2019) (providing a translated version of Egypt’s Constitution). In Germany, article 20a of the Basic Law identifies animal protection as a state objective. See GRUNDGESETZ [GG] [BASIC LAW] May 23, 1949, art. 20a (Ger.), https://www.bundestag.de/pdf/80201000.pdf; ENTWURF EINES GESETZES ZUR ÄNDERUNG DES GRUNDGESETZES (STAATSZIEL TIERSCHUTZ) [LAW TO CHANGE THE BASIC LAW
“bring . . . [animals] into the very structure of the body politic.”  

Also on the international level, we are observing a growing awareness of the importance of thinking about the impacts of human activity on animals, e.g., under the auspices of the World Organization for Animal Health (OIE), the UN, the Council of...
Europe, and the World Trade Organization (WTO). Viewed together, these developments suggest an emerging universal consensus about the relevance of animal issues and that human diligence must be exercised when interacting with animals.

In parallel, more and more scholars argue that humans feel violated themselves—in their dignity, and even in their rights—when animal protection laws are not adhered to or when governments fail to enact such laws in the first place. This claim rests on an argument that ethicists have been raising for centuries, namely that there is a direct link between treating animals unkindly and the degradation of man. Immanuel Kant famously stated it as:

If a man shoots his dog because the animal is no longer capable of service, he does not fail in his duty to the dog, for the dog cannot judge, but his act is inhuman and damages in himself that humanity which it is his duty to show towards mankind. If he is not to stifle his human feelings, he must practice kindness towards animals, for he who is cruel to animals becomes hard also in his dealings with men.

Today, policy makers recognize the connection between preventing animal cruelty and curbing human crimes, on the one hand, and animal cruelty and the brutalization of society, on the other. People who are cruel towards humans often have a history of animal cruelty; vice versa, animal abuse is regularly an indicator for abuse of other family members (in the literature, these correlations are known as “the link”).


397 IMMANUEL KANT, LECTURES ON ETHICS 212 (P. Heath & J.B. Schneewind trans., 1997).

398 This link is noticed and examined by Rebecca L. Bucchieri. See Rebecca L. Bucchieri, Bridging the Gap: The Connection between Violence Against Animals and Violence Against Humans, 11 J. ANIMAL & NAT. RESOURCE L. 115 (2015); see also
Drawing on these insights, Konstantin Leondarakis argues for a human right to animal protection, providing the following: “It is a right of every person to reasonably safeguard the lives and integrity of animals, and ensure they are treated with dignity.”

Such a right is needed, he claims, because current violations of animal interests cannot be redressed by animals, and because humans have only a limited ability to contribute to the proper enforcement of these laws; indeed, humans themselves lack standing because they have not suffered an injury. Leondarakis argues that a discrete human right to animal protection should be established, but that it could also be drawn from existing human rights guarantees, like the human right to privacy and family life, and the protection of human dignity.

In CAFOs, farmed animals suffer from numerous production-related cardiovascular, skeletal, and respiratory diseases as well as mutilation, mourning, aggression, frustration, and lethal stress syndromes. Against this background, exempting animal cruelty in agriculture from the purview of the law is problematic in two ways. First, the general principle of animal welfare demands


400 Id. at 30.

401 Id. at 41. Article 8 ECHR protects relationships to other beings, namely animals. See ECHR, supra note 329, art. 8 (providing that “[e]veryone has the right to respect for his private and family life, his home and his correspondence.”).

402 Not only does a violation of animal protection violate a person’s subjective dignity; it also infringes the objective worth of dignity. LEONDARAKIS, supra note 398, at 42.

403 The animal industry has changed the morphology and physiology of animals, which impairs their ability to adapt. Today, chickens reach the weight of two kilograms twice as fast as they did fifty years ago. Dairy cows were intensively bred for more productive mammary glands. Cows used for meat production now have enormous muscle mass, which strains their internal organs. Joy M. Verrinder, Nicki McGrath & Clive J.C. Phillips, Science, Animal Ethics and the Law, in ANIMAL LAW AND WELFARE: INTERNATIONAL PERSPECTIVES 63, 63–64 (Deborah Cao & Steven White eds., 2016). In CAFOs, animals are mutilated to prevent injuries that arise at high stocking densities: tails are docked; beaks, teeth, and toes are clipped; ears are notched; horns are removed; and castration is undertaken without anesthetics. See David N. Cassuto, Bred Meat: The Cultural Foundation of Factory Farm, 70 L. & CONTEMP. PROBS. 59, 64 (2007); Matheny & Leahy, supra note 122, at 328; PEW COMM’N, supra note 29, at 35.

404 See supra text accompanying note 389.
that animals be treated humanely and that they be spared from suffering. Because agricultural production affects the highest number of domesticated animals, it is, from a teleological perspective, unjustifiable not to apply this principle to the agricultural sector. This prompts us to address and question the blanket authorizations given to CAFO industries to inflict systematic cruelty on animals through broad right-to-farm laws and far-reaching immunities from the law. Second, should the human right to animal protection be established as a stand-alone right or as an integral part of the human right to privacy and family life, then states would violate their legal duties to protect and respect this right by not establishing the necessary legal framework to review practices that threaten and likely violate it. In other words, the human right to animal protection would apply regardless of sweeping farmers’ rights. Together, these developments make clear that the interests of animals and humans are often intertwined and that there are numerous entry-points that could be used more systematically in the future for litigation and advocacy purposes.

V. Conclusion

Across the world, most people cling onto a “happy farm” image, be it the red barn in the US or cows roaming on green pastures in Europe. This image has been produced and sustained through heavy marketing campaigns. The reality is markedly different. Laws originally designed to govern small family farms now protect corporate giants, many of which are multinationals. By benefitting from farmers’ rights (i.e., right-to-farm laws and exemptions from environmental and animal laws), agribusinesses are, in many cases, shielded from regulation. In fact, as we argued, the combination of rampant corporate activity and de facto immunity from the law acts as a toxic agent that threatens the environment and our livelihoods.

The host of negative effects of animal agriculture on the immediate environment, workers, and the local community are well-documented. However, little is done academically to explore their global repercussions, particularly on human rights guarantees. Human rights litigation, advocacy, and research have yet to recognize and address this angle. With this contribution, we have attempted to fill this soaring gap. We have shown how intensified animal agriculture threatens and violates the human rights to food, water, a safe environment, land, and animal protection, and we have made apparent the urgency to address these issues. Under international law, states are obligated to respect, protect, and fulfill

405 Wilson, supra note 32, at 451.
human rights—duties which they violate when they exempt from the law the many activities of animal agriculture that directly cause human suffering and violate or threaten well-established basic rights. While in domestic law, states are prima facie at liberty to establish insulations for agriculture, international law (particularly the human rights regime) binds all states and puts a halt to the most sweeping forms of agricultural exceptionalism. This knowledge can and should be used as a strategy for litigation and advocacy to hold states accountable, and further prompt us as a society to seriously question the rationale underlying the many right-to-farm laws and exemptions enjoyed by this type of agriculture.406

Through our contribution, we hope to forge a pathway for the many more analyses that are needed at this juncture. In particular, more research is necessary to determine which other human rights are violated or threatened by animal agriculture, such as the right to life, housing, privacy, and family life. Future research should notably also explore the responsibility of agricultural businesses to protect these human rights and how such actors can be held accountable for violations.407

As time passes, finding alternatives to CAFOs will become a matter of practical necessity due to the biophysical limits of land, water, and biomass. In the meantime, for the sake of human health and life, animals, and a safe environment, appropriate regulation—including and perhaps especially on the international plane—is essential to anticipate, address, and remedy these violations. International human rights lawyers are uniquely equipped to address these issues and contribute to the further development and reconceptualization of this nexus, acting as catalysts for much-needed change.

406 Ruhl, supra note 111, at 263; see also Alford & Berger Richardson, supra note 44, at 136 (“RTFs [right-to-farm laws] have failed to adapt to changing industry standards in agricultural production and to incorporate the level of public accountability required to ensure the continued sustainability of the industries and lands they exist to protect.”).
407 See supra text accompanying note 24.