

# AnimalOutlook

RE: Cultivation of hemp for cannabidiol (CBD) in Arkansas

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## I. Introduction

You asked me to research the feasibility of industrial hemp cultivation for cannabidiol (CBD) on a transformed chicken farm outside of Texarkana, Arkansas. I conclude that industrial hemp cultivation on the site faces significant challenges. Although hemp has been partially legalized in Arkansas—and will be subject to fewer restrictions after it is removed from Schedule I of the Controlled Substances Act by the 2018 Farm Bill—the crop remains subject to numerous and burdensome regulations. In addition, the American market for industrial hemp is still in its infancy, and to be profitable, hemp must be cultivated in larger quantities (upwards of 50 acres) than individual farmers would likely find practical. Some of those difficulties could be ameliorated by negotiating an advance contract for production of CBD with a large purchaser but others (such as the regulatory obstacles) would remain. If our farmers elect to pursue hemp cultivation, in order to increase likely profits, I recommend negotiating a purchase contract in advance and devoting as much land to hemp as possible.

## II. Hemp Cultivation: Past and Present

Hemp is a variety of *Cannabis sativa*, the same plant that can be grown as marijuana.<sup>1</sup> Legally, hemp is distinguished from its psychoactive cousin by its much lower levels of tetrahydrocannabinol (THC), the component that makes users feel “high.” Federal law requires

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<sup>1</sup> Angela Parr, *Industrial Hemp from Seed to Market*, Cornell Coop. Ext. 2 (2017).

# AnimalOutlook

hemp cultivars to contain no more than 0.3 percent THC by weight,<sup>2</sup> whereas marijuana cultivars tend to have 3 to 15 percent THC by weight.<sup>3</sup> As a result, hemp lacks many of marijuana's psychoactive properties.<sup>4</sup> Physically, hemp is also much taller than marijuana—each plant can grow up to 16 feet high<sup>5</sup>—and is grown for industrial, rather than recreational, uses.

Hemp has been cultivated by humans for thousands of years.<sup>6</sup> The species followed nomadic camps during the pre-agriculture stage of early human development.<sup>7</sup> Later, during the Bronze Age, ancient Chinese used hemp fibers to make fabric and rope.<sup>8</sup> After arriving in the New World with the early English colonists, hemp was grown to produce twine and fabrics by some of America's Founding Fathers.<sup>9</sup> Early drafts of the Declaration of Independence and the

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<sup>2</sup> 7 U.S.C. § 5940(b)(2). By comparison, the European Union sets the maximum THC content at 0.2 percent by weight. Jerome H. Cherney & Ernest Small, *Industrial Hemp in North America: Production, Politics and Potential*, 6 *Agronomy* 58, 59 (2016).

<sup>3</sup> Parr, *supra* note 1, at 3.

<sup>4</sup> Amanda Chicago Lewis, *Mitch McConnell: Drug Warrior, CBD Champion?*, *Rolling Stone*, June 29, 2018, <https://www.rollingstone.com/politics/politics-features/mitch-mcconnell-drug-warrior-cbd-champion-667089/>.

<sup>5</sup> Parr, *supra* note 1, at 3.

<sup>6</sup> Craig Schluttenhofer & Ling Yuan, *Challenges towards Revitalizing Hemp: A Multifaceted Crop*, 22 *Trends in Plant Sci.* 917, 917 (2017).

<sup>7</sup> Cherney & Small, *supra* note 2, at 58.

<sup>8</sup> Alex Halperin, *The hemp revival: why marijuana's cousin could soon be big business*, *The Guardian*, June 11, 2018, <https://www.theguardian.com/society/2018/jun/11/the-hemp-revival-why-marijuanas-cousin-could-soon-be-big-business>.

<sup>9</sup> Cherney & Small, *supra* note 2, at 59; Jessie Higgins, *Farmers hope 2018 Farm Bill will lift 80-year ban on hemp*, *UPI*, Aug. 1, 2018, <https://www.upi.com/Farmers-hope-2018-Farm-Bill-will-lift-80-year-ban-on-hemp/2701533148942/>; Renée Johnson, Cong. Res. Serv. Rep. No. RL32725, *Hemp as an Agricultural Commodity* 12 (2018).

# AnimalOutlook

Constitution were written on hemp paper.<sup>10</sup> Hemp remained widely grown in the United States—particularly in Kentucky<sup>11</sup>—until the late 19th century, when falling cotton prices made the latter more competitive as a fabric source.<sup>12</sup> The plant enjoyed a final brief revival as a result of government support during World War II—production peaked at more than 150 million pounds in 1943—but hemp had virtually disappeared from American farms by the late 1950s.<sup>13</sup>

Today, though, hemp appears on the cusp of a worldwide resurgence. As a crop, it has many advantages: hemp is a “low-fuss” plant that thrives in a variety of climates and appears in its wild form in all 50 states.<sup>14</sup> After the early development stage, it is relatively drought-resistant and requires only requires 12–15 inches of water throughout the growing season,<sup>15</sup> much less than other commodity crops such as cotton, corn, and soybeans.<sup>16</sup> Hemp also requires fewer pesticides than corn and soybeans, crowds out weeds, and can aerate soil with its deep root

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<sup>10</sup> Higgins, *supra* note 9; Johnson, *supra* note 9, at 12.

<sup>11</sup> Cherney & Small, *supra* note 2, at 59.

<sup>12</sup> Johnson, *supra* note 9, at 12.

<sup>13</sup> *Id.*

<sup>14</sup> Janet Burns, *We Should Be Pouring Time and Money into Hemp, Period*, Forbes, Sept. 30, 2018, <https://www.forbes.com/sites/janetwburns/2018/09/30/we-should-be-pouring-time-and-money-in-to-hemp-period/>; Alexander Nieves, *Agriculture hopes hemp legislation will finally go through*, Politico, Aug. 15, 2018, <https://www.politico.com/story/2018/08/15/agriculture-hopes-hemp-legislation-will-finally-go-through-778736>; Ken Roseboro, *Can Hemp Become a 60 Million Acre Crop and Billion Dollar Industry?* EcoWatch (Oct. 3, 2018), <https://www.ecowatch.com/hemp-billion-dollar-industry-2609801535.html>; Cherney & Small, *supra* note 2, at 66.

<sup>15</sup> Parr, *supra* note 1, at 3; Brian Barth, *So, You Want to Be a Hemp Farmer?*, Modern Farmer (July 9, 2018), <https://modernfarmer.com/2018/07/so-you-want-to-be-a-hemp-farmer/>.

<sup>16</sup> Halperin, *supra* note 8; Nieves, *supra* note 14.

# Animal Outlook

system.<sup>17</sup> Finally, it grows quickly: hemp can be harvested in as few as 60 to 90 days after planting, one-third to one-half as long as it takes to grow cotton.<sup>18</sup>

In addition to the relative ease of growing it, hemp has an astonishing number of uses—more than 25,000 by one count<sup>19</sup>—ranging from textiles,<sup>20</sup> to automobile paneling,<sup>21</sup> to insulation,<sup>22</sup> to food supplements,<sup>23</sup> and even to building materials (“hempcrete”).<sup>24</sup> The product categories with the largest market potential are fiber, oilseed, and pharmaceuticals.<sup>25</sup> As of 2016, the Hemp Industries Association reported that nearly \$700 million of hemp-based products were sold in the United States, approximately two-thirds of which consisted of body products, nutritional supplements, and foods.<sup>26</sup> The *Hemp Business Journal* claimed that more than \$820 million in sales occurred in 2017.<sup>27</sup> Compounds derived from hemp also show promise as sources for new pharmaceuticals. One compound, cannabidiol (“CBD”), has anti-inflammatory,

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<sup>17</sup> Roseboro, *supra* note 14; Barth, *supra* note 15.

<sup>18</sup> Lynn Brezosky, *Texas farmers see new source of green in legal hemp*, Houston Chron., Aug. 30, 2018, <https://www.houstonchronicle.com/business/article/Texas-farmers-see-new-source-of-green-in-legal-13191299.php>; David Koon, *Industrial hemp pilot program coming soon to Arkansas*, Ark. Times, Dec. 8, 2017, <https://www.arktimes.com/ArkansasBlog/archives/2017/12/08/industrial-hemp-pilot-program-coming-soon-to-arkansas>.

<sup>19</sup> Brezosky, *supra* note 18.

<sup>20</sup> Johnson, *supra* note 9, at 2.

<sup>21</sup> Higgins, *supra* note 9.

<sup>22</sup> Johnson, *supra* note 9, at 2–3.

<sup>23</sup> Halperin, *supra* note 8.

<sup>24</sup> *Id.*

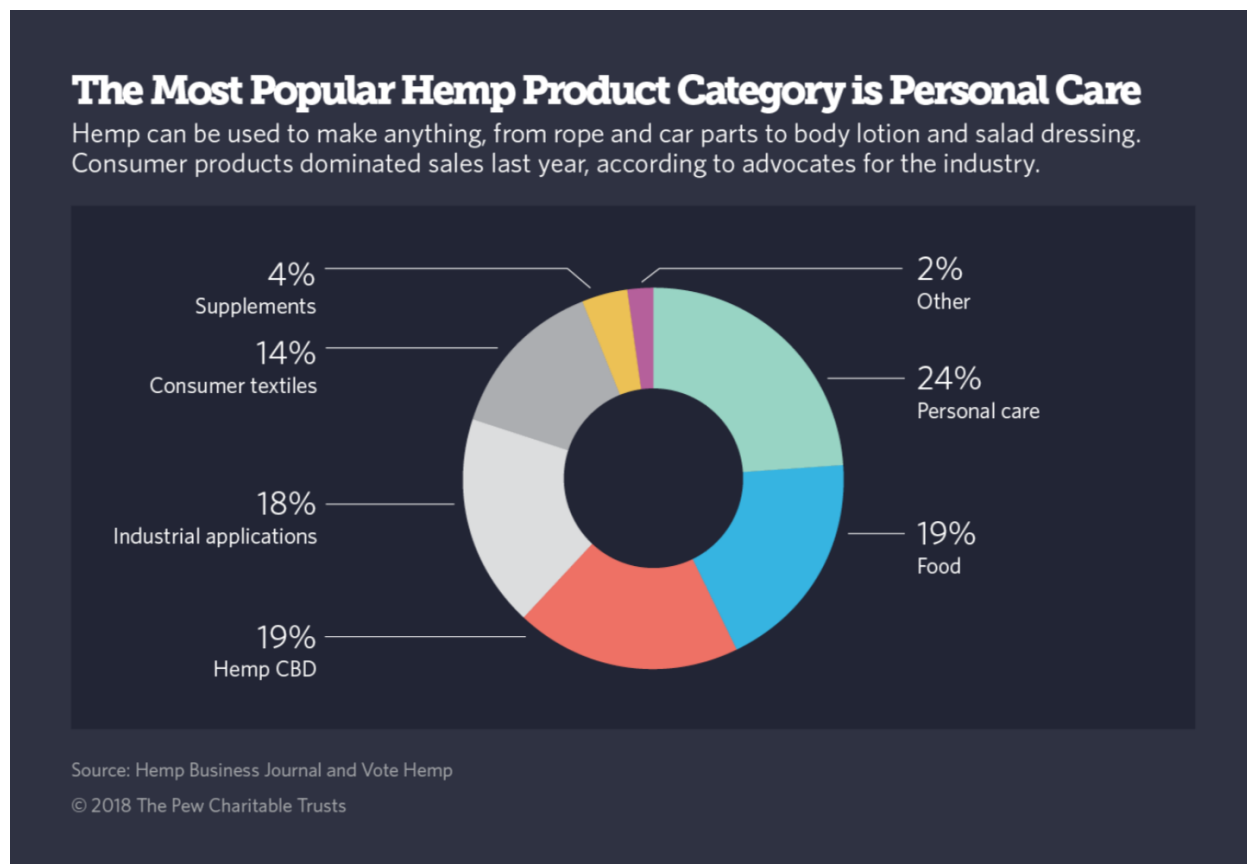
<sup>25</sup> Cherney & Small, *supra* note 2, at 60.

<sup>26</sup> Johnson, *supra* note 9, at 3–4.

<sup>27</sup> Nieves, *supra* note 14.

# Animal Outlook

anti-anxiety, and anti-seizure properties. Recently, for the first time, the FDA approved a drug derived from CBD (Epidiolex, a seizure medication) for sale in the United States.<sup>28</sup>



In light of that newly recognized potential, industrial hemp has recently been subject to a great deal of “hype” in the United States.<sup>29</sup> Some have predicted that the American market for hemp could expand by factor of six to \$1.65 billion by 2021.<sup>30</sup> Even more extravagantly, the cannabis research firm Brightfield Group claims that sales of CBD products *alone* will reach \$22

<sup>28</sup> Olivia Paschal, *Congress Finally Can Tell Hemp from Pot*, The Atlantic, Aug. 7, 2018, <https://www.theatlantic.com/politics/archive/2018/08/congress-finally-knows-the-difference-between-hemp-and-pot/566942/>.

<sup>29</sup> Cherney & Small, *supra* note 2, at 76.

<sup>30</sup> Brezosky, *supra* note 18.

# AnimalOutlook

billion by 2022.<sup>31</sup> Already, the per-acre value of the crop has risen to approximately \$21,000 from seeds and \$12,500 from stalks, dwarfing cotton's per-acre value of less than \$650.<sup>32</sup>

But despite those impressive numbers, at the moment, very little hemp is grown in the United States. That is largely due to the Controlled Substances Act of 1970—discussed below—which virtually outlawed commercial applications of cannabis.<sup>33</sup> Instead, America is the world's leading importer of the crop.<sup>34</sup> In 2017, imports of hemp products to the United States (mostly seeds) totaled \$67.3 million, more than ten times as much as in 2005.<sup>35</sup>

Worldwide, the various countries of Europe grow the most hemp—35 to 40 percent of the global total<sup>36</sup>—but approximately 90 percent by value of the hemp imported into the United States comes from Canada.<sup>37</sup> Like most European countries, Canada legalized commercial hemp cultivation in the 1990s after decades of prohibition.<sup>38</sup> The industry is heavily regulated: to obtain a license to grow hemp, farmers must provide GPS coordinates for their fields, undergo

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<sup>31</sup> Lester Black, *Mitch McConnell's Farm Bill Could Blow Up the CBD Market*, The Stranger, Nov. 28, 2018, <https://www.thestranger.com/slog/2018/11/28/36356843/the-republican-turtle-senator-from-kentucky-wants-to-legalize-cbd-thats-a-huge-deal>.

<sup>32</sup> Brezosky, *supra* note 18.

<sup>33</sup> Broadly speaking, the Controlled Substances Act bars anyone from manufacturing or distributing a Schedule I controlled substance such as cannabis without obtaining a registration from the Drug Enforcement Administration. *See* 21 U.S.C. §§ 822–823. Because the agency has been “loath to grant” such registrations, *see* David Bennett, *Industrial hemp production moving to states?*, Delta Farm Press Oct. 27, 2015, <https://www.deltafarmpress.com/markets/industrial-hemp-production-moving-states>, hemp cultivation is effectively banned.

<sup>34</sup> Higgins, *supra* note 9.

<sup>35</sup> Johnson, *supra* note 9, at 4.

<sup>36</sup> *Id.* at 6.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* at 10.

# Animal Outlook

criminal background checks, and certify that they are using low-THC hemp seeds.<sup>39</sup> (Similar requirements are in place in many American states.) Hemp grown, processed, and sold in Canada may contain no more than 0.3 percent THC by weight.<sup>40</sup> Some of those requirements are expected to be relaxed soon, however, as Canada prepares to legalize marijuana.<sup>41</sup>

The second-largest importer of hemp products into the United States is China, accounting for approximately 3 to 5 percent of annual imports.<sup>42</sup> But even though its penetration into the American market is relatively small next to Canada, in many other respects China is a hemp “superpower.” China is the world’s single largest producer of hemp and particularly dominates the market for textile-grade hemp fibers and textile products.<sup>43</sup> Furthermore, the country is a major producer of hemp seed cultivars,<sup>44</sup> and more than half of the world’s 600-some hemp-related patents are held by Chinese citizens.<sup>45</sup>

In the United States—where, as will be discussed below, cultivation of hemp currently falls into a legal limbo—hemp was grown in 19 states as of 2017. Total U.S. cultivation

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<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 10–11.

<sup>42</sup> *Id.* at 6.

<sup>43</sup> Cherney & Small, *supra* note 2, at 70.

<sup>44</sup> Johnson, *supra* note 9, at 6.

<sup>45</sup> Halperin, *supra* note 8.

# Animal Outlook

encompassed more than 25,000 acres, more than twice as much as was planted in 2016.<sup>46</sup>

Colorado, Kentucky, and Oregon were the largest hemp producers.<sup>47</sup>

### III. Legal Treatment of Hemp in the United States

#### A. Prohibition

In the early 20th century, hemp was swept up in the frenzy to criminalize cannabis.<sup>48</sup>

Between 1914 and 1933, 33 states barred the cultivation of cannabis for its psychotropic effects.

<sup>49</sup> At the federal level, the 1937 Marihuana Tax Act defined cannabis as a narcotic and required that farmers obtain federal registration and a special tax stamp in order to grow it.<sup>50</sup> The

Marihuana Tax Act's definition was broad enough to encompass some forms of hemp:

The term "marihuana" means all parts of the plant *Cannabis sativa* L., whether growing or not; the seeds thereof; the resin extracted from any part of such plant; and every compound, manufacture, salt, derivative, mixture, or preparation of such plant, its seeds, or resin; but shall not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination.<sup>51</sup>

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<sup>46</sup> Jonathan H. Harsch, *Farm bill could give a big boost to industrial hemp industry*, Agri-Pulse (Oct. 7, 2018), <https://www.agri-pulse.com/articles/11323-farm-bill-could-give-a-big-boost-to-industrial-hemp-industry>.

<sup>47</sup> Lewis, *supra* note 4; Nieves, *supra* note 14.

<sup>48</sup> See generally *Reefer Madness* (George A. Hirliman Productions 1936).

<sup>49</sup> Johnson, *supra* note 9, at 12.

<sup>50</sup> *Id.* at 13.

<sup>51</sup> Pub. L. 75-238, 50 Stat. 551, 551 (1937).



# Animal Outlook

That definition was later incorporated into Controlled Substances Act of 1970 (“CSA”),<sup>52</sup> which places all varieties of cannabis into the most restrictive category, Schedule I.<sup>53</sup>

The CSA does not make growing cannabis categorically illegal, but it does place severe limits on its cultivation. In order to grow hemp in compliance with the CSA, a farmer first must obtain a permit from the Drug Enforcement Administration (“DEA”).<sup>54</sup> Historically, the DEA has been reluctant to grant such permits, even in states where growing hemp is legal under state law.<sup>55</sup> For example, in 1999, North Dakota enacted a law that authorized hemp cultivation. Researchers repeatedly sought permission from the DEA to grow hemp, but the agency refused to grant a permit.<sup>56</sup> Hence, commercial hemp farming was effectively prohibited in the United States from the enactment of the CSA in 1970 until the 2014 Farm Bill.

## B. *Partial Legalization*

### 1. In General

Beginning in the 1990s, Canada and many European countries—which had prohibited hemp under their own drug control statutes—began to reauthorize commercial hemp farming.<sup>57</sup> Within two decades, the United States became the sole developed country to prohibit the commercial cultivation of hemp.<sup>58</sup> Over that same period, state officials in Kentucky increasingly sought a substitute for tobacco, which had been the state’s dominant crop but demand for which

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<sup>52</sup> 21 U.S.C. § 801 *et seq.*; *see id.* § 802(16).

<sup>53</sup> *See id.* § 812.

<sup>54</sup> *See id.* §§ 822–823; *see also* Johnson, *supra* note 9, at 13.

<sup>55</sup> Bennett, *supra* note 33.

<sup>56</sup> Johnson, *supra* note 9, at 19.

<sup>57</sup> *Id.* at 8–9.

<sup>58</sup> Brezosky, *supra* note 18.

# Animal Outlook

had cratered due to anti-smoking campaigns.<sup>59</sup> In 2012, Kentucky’s newly-elected agricultural commissioner, James Comer, made reviving hemp farming his top political priority.<sup>60</sup> He soon found a powerful ally in another Kentucky politician: U.S. Senator Mitch McConnell. Convinced of hemp’s benefits by his colleague U.S. Senator Rand Paul,<sup>61</sup> McConnell successfully obtained an amendment to the Agriculture Act of 2014<sup>62</sup> (the “2014 Farm Bill”), that partially decriminalized hemp cultivation after a decades-long ban.

Specifically, the 2014 Farm Bill provides in pertinent part:

Notwithstanding the Controlled Substances Act, 21 U.S.C. 801 et seq., the Safe and Drug-Free Schools and Communities Act, 20 U.S.C. 7101 et seq., chapter 81 of title 41, United States Code, or any other Federal law, an institution of higher education . . . or a State department of agriculture may grow or cultivate industrial hemp if—(1) the industrial hemp is grown or cultivated for purposes of research conducted under an agricultural pilot program or other agricultural or academic research; and (2) the growing or cultivating of industrial hemp is allowed under the laws of the State in which such institution of higher education or State department of agriculture is located and such research occurs.<sup>63</sup>

The statute defines “industrial hemp” to mean “the plant *Cannabis sativa* L. and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.”<sup>64</sup> “Agricultural pilot program,” in turn, is defined to

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<sup>59</sup> Paschal, *Congress Finally Can Tell Hemp from Pot*, *supra* note 28.

<sup>60</sup> *Id.*

<sup>61</sup> Mike DeBonis, *Mitch McConnell renews push to legalize industrial hemp*, Wash. Post, Mar. 26, 2018), <https://www.washingtonpost.com/news/powerpost/wp/2018/03/26/mitch-mcconnell-renews-push-to-legalize-industrial-hemp/>.

<sup>62</sup> Pub. L. 113-79, 128 Stat. 649 (2014) (hereinafter “2014 Farm Bill”).

<sup>63</sup> 2014 Farm Bill § 7606(a), *codified at* 7 U.S.C. § 5940(a).

<sup>64</sup> *Id.* § 7606(b), *codified at* 7 U.S.C. § 5940(b).

# Animal Outlook

mean “a pilot program to study the growth, cultivation, *or marketing* of industrial hemp.”<sup>65</sup>

“Marketing” is the key term, because it invites state officials to “argue[] that the only way to conduct market research for a product is to allow it to be bought and sold.”<sup>66</sup> The “vast majority” of the states that created agricultural pilot programs in accordance with the 2014 Farm Bill authorized commercial sales under the pretext of enabling “private hemp farmers . . . [to] share their experience growing, processing or selling the plant.”<sup>67</sup>

Section 7606 partially resuscitated America’s hemp farming industry, but left the legality of the crop uncertain. As the DEA subsequently noted, the 2014 Farm Bill “did not remove industrial hemp from the controlled substances list.”<sup>68</sup> For the most part—despite Congress’s evident intent in the 2014 Farm Bill to permit industrial hemp farming—the DEA has continued to enforce federal drug laws against hemp with vigor.

That has been especially confounding with respect to hemp seeds. Because of the CSA, until very recently, there were no viable hemp seeds available for purchase within the United States.<sup>69</sup> (That has changed somewhat with the hemp revival, and companies in several U.S. states, including Arkansas, have started to grow seeds for use by farmers.<sup>70</sup>) Therefore, in order

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<sup>65</sup> *Id.* (emphasis added).

<sup>66</sup> Sophie Quinton, *This Extract Is Driving a Hemp Gold Rush. But Is It Legal?*, Stateline (Feb. 5, 2018), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/02/05/this-extract-is-driving-a-hemp-gold-rush-but-is-it-legal>.

<sup>67</sup> *Id.*

<sup>68</sup> U.S. Dep’t of Agric., Drug Enforcement Admin., & Food & Drug Admin., *Statement of Principles on Industrial Hemp*, 81 Fed. Reg. 53,395, 53,395 (2016) (hereinafter “*Statement of Principles*”).

<sup>69</sup> Johnson, *supra* note 9, at 15.

<sup>70</sup> Bennett, *supra* note 33.

# Animal Outlook

to obtain seeds for planting, farmers usually have needed to import them from abroad. But importing viable cannabis seeds requires DEA approval under the Controlled Substances Import and Export Act (“CSIEA”), 21 U.S.C. §§ 951–971, and the agency’s approval has not been readily forthcoming. In May 2014, for instance, Kentucky’s Department of Agriculture attempted to import 250 pounds of viable hemp seeds from Italy through Louisville International Airport. The DEA had U.S. Customs block the shipment, arguing that Kentucky had not obtained the proper permits under the CSIEA. The seeds were eventually released, but only after Kentucky filed a lawsuit.<sup>71</sup> Congress responded by adding language to the annual appropriations bills that barred the DEA from “prohibit[ing] the transportation, processing, sale, or use of industrial hemp that is grown or cultivated” in accordance with the 2014 Farm Bill.<sup>72</sup>

In 2016, the DEA, the Food and Drug Administration (“FDA”), and the U.S. Department of Agriculture (“USDA”) issued a joint *Statement of Principles on Industrial Hemp* (“*Statement of Principles*”),<sup>73</sup> clarifying how they intended to reconcile the apparent conflict between the CSA and the 2014 Farm Bill. The agencies admitted that the 2014 Farm Bill “left open many questions regarding the continuing application of Federal drug control statutes to the growth, cultivation, manufacture, and distribution of industrial hemp products, as well as the extent to which growth by private parties and sale of industrial hemp products are permissible.”<sup>74</sup> The agencies attempted to answer some of those questions. First, they stated that industrial hemp could be cultivated both by “State departments of agriculture” as well as by “*persons licensed*,

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<sup>71</sup> *Id.* at 24.

<sup>72</sup> *Id.* at 15 (2018) (quoting Consolidated Appropriations Act, P.L. 115-141 (2018)).

<sup>73</sup> *Statement of Principles*, 81 Fed. Reg. at 53,395.

<sup>74</sup> *Id.* at 53,396.

# Animal Outlook

registered, or otherwise authorized by them to conduct research under an agricultural pilot program,” or “persons employed by or under a production contract or lease with them to conduct such research.”<sup>75</sup> That appears to acknowledge that private farmers may conduct “marketing research” on industrial hemp with the permission of the state department of agriculture.<sup>76</sup> Second, the agencies stated that “[i]nstitutions of higher education and other participants authorized to carry out agricultural pilot programs . . . may be able to participate in USDA research or other programs,”<sup>77</sup> seemingly accepting that federal funds may be used to support research on industrial hemp.<sup>78</sup>

At that point, unfortunately, the light shed by the *Statement of Principles* abruptly dims. The *Statement of Principles* appears to conflict with the 2014 Farm Bill in three respects. First, the *Statement of Principles* defines industrial hemp more narrowly than the 2014 Farm Bill. Whereas the 2014 Farm Bill requires that industrial hemp have “a *delta-9* tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis,”<sup>79</sup> the *Statement of Principles* drops the “delta-9” and instead defines “tetrahydrocannabinols” to “include[] all isomers, acids, salts, and salts of isomers of tetrahydrocannabinols.”<sup>80</sup> That suggests that *all* variants of THC will count against the 0.3 percent threshold, not just (as the statute requires) delta-9 THC.<sup>81</sup> Second, the *Statement of Principles* asserts that “industrial hemp products may be sold in a State

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<sup>75</sup> *Id.*

<sup>76</sup> Johnson, *supra* note 9, at 26.

<sup>77</sup> *Statement of Principles*, 81 Fed. Reg. at 53,396.

<sup>78</sup> Johnson, *supra* note 9, at 27.

<sup>79</sup> 2014 Farm Bill § 7606(b) (emphasis added), *codified at* 7 U.S.C. § 5940(b).

<sup>80</sup> *Statement of Principles*, 81 Fed. Reg. at 53,395.

<sup>81</sup> *See* Johnson, *supra* note 9, at 27.

# Animal Outlook

with an agricultural pilot program or among States with agricultural pilot programs” only for the purpose of “marketing research,” and “not for the purpose of general commercial activity.”<sup>82</sup>

That may comport with the language of the 2014 Farm Bill—which uses some subterfuge to avoid plainly legalizing industrial hemp—but not with its intent, which clearly was to authorize commercial hemp production.<sup>83</sup> Finally, the *Statement of Principles* reiterates that “[i]ndustrial hemp plants and seeds may not be transported across State lines” and provides that importation of viable hemp seeds must be done in accordance with the CSIEA.<sup>84</sup> That appears to conflict with Congress’s multiple appropriations riders that bar the DEA from expending funds to undermine hemp cultivation that is permitted under the 2014 Farm Bill.<sup>85</sup>

Since the 2014 Farm Bill, the DEA’s regulation of recreational cannabis—which the CSA does not distinguish from industrial hemp—also has been fraught. Ten states and the District of Columbia have now legalized marijuana for recreational use.<sup>86</sup> After the first two states—Washington and Colorado—legalized recreational use in 2012, the Deputy U.S. Attorney General issued a memorandum (known as the “Cole Memorandum”) stating that federal prosecutors should prioritize serious public safety and health crimes involving marijuana, rather

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<sup>82</sup> *Statement of Principles*, 81 Fed. Reg. at 53,395.

<sup>83</sup> See Johnson, *supra* note 9, at 27 (noting that “Members of Congress have asked for confirmation that ‘general commercial activity’ does not prevent any types of sale from occurring from the framework of an approved pilot program”).

<sup>84</sup> *Statement of Principles*, 81 Fed. Reg. at 53,395–96.

<sup>85</sup> See Johnson, *supra* note 9, at 27–28.

<sup>86</sup> See German Lopez, *Marijuana has been legalized in 10 states and Washington, DC*, Vox (Nov. 14, 2018), <https://www.vox.com/identities/2018/8/20/17938336/marijuana-legalization-states-map>.

# Animal Outlook

than personal possession in states in which marijuana was legal.<sup>87</sup> In January 2018, however, U.S. Attorney General Jeff Sessions rescinded the Cole Memorandum.<sup>88</sup> Now that Attorney General Sessions has been replaced, it is unclear what, if anything, is the federal policy with regard to criminal prosecutions for marijuana possession in states where it has been legalized.

## 2. Arkansas

Arkansas legalized cultivation of hemp in April 2017 with passage of the Arkansas Industrial Hemp Act (“AIHA”), Acts 2017, No. 981. The bill became law without Governor Asa Hutchinson’s signature.<sup>89</sup> The AIHA embraces the suggestion of the 2014 Farm Bill by creating an “industrial hemp research program,” administered by the Arkansas State Plant Board, under which persons could be “license[d] . . . to grow industrial hemp.”<sup>90</sup> The statute permits (but does not require) the State Plant Board to “establish a program of annual licensure to allow persons to grow industrial hemp in the state.”<sup>91</sup> It envisions two categories of licenses: first, an “industrial hemp research program grower license, to allow a person to grow industrial hemp in this state in a controlled fashion solely and exclusively as part of the industrial hemp research program overseen by the board,” and second, an “industrial hemp grower license to allow a person to grow industrial hemp in this state.”<sup>92</sup> The latter would be contingent on “the authorization of

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<sup>87</sup> See Johnson, *supra* note 9, at 22–23 (citing Letter from Deputy U.S. Attorney General to all United States Attorneys regarding marijuana enforcement (Aug. 29, 2013)).

<sup>88</sup> Johnson, *supra* note 9, at 23 (citing Memorandum from Attorney General Jefferson B. Sessions for all United States Attorneys regarding marijuana enforcement (Jan. 4, 2018)).

<sup>89</sup> Stephen Steed, *Rules OK’d for hemp crops in Arkansas*, Ark. Democrat-Gazette, June 22, 2018.

<sup>90</sup> Acts 2017, No. 981, § 1, *codified at* Ark. Stat. § 2-15-404(a).

<sup>91</sup> *Id.*, *codified at* Ark. Stat. § 2-15-408(a).

<sup>92</sup> *Id.*, *codified at* Ark. Stat. § 2-15-408(b).

# Animal Outlook

legal industrial hemp growth and production in the United States under applicable federal laws relating to industrial hemp.”<sup>93</sup> The statute creates various requirements for legal hemp cultivation: among other things, the farmer must provide a “legal description and global positioning coordinates of the production fields to be used to grow industrial hemp,” allow “physical inspections” of the farm site by the State Plant Board, and submit to “random testing of the industrial hemp for compliance with tetrahydrocannabinol levels.”<sup>94</sup> In addition, hemp cultivation would be subject to whatever rules the State Plant Board chose to adopt.<sup>95</sup>

After the AIHA was enacted, the State Plant Board took more than a year to develop the authorized regulations, thereby delaying the first industrial hemp planting season until the spring of 2019.<sup>96</sup> With Governor Hutchinson’s approval, the regulations finally were issued on August 31, 2018.<sup>97</sup> In many respects, the final rules are not terribly encouraging to industrial hemp cultivation and create additional restrictions on the crop that were not mandated by the AIHA. For example, the regulations prohibit “grow[ing], process[ing], or stor[ing] industrial hemp in any structure that is used for residential purposes,” or “within 1,000 feet of a school, daycare or similar public areas frequented by children.”<sup>98</sup> They also bar anyone with “[a]ny drug-related or controlled substance felony conviction at any time”—or any other “felony conviction in the prior

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<sup>93</sup> *Id.*, codified at Ark. Stat. § 2-15-408(b)(1)(B)(ii).

<sup>94</sup> *Id.*, codified at Ark. Stat. § 2-15-408(c)(2)(A)(ii), (B)(i), & (k).

<sup>95</sup> *Id.*, codified at Ark. Stat. § 2-15-404(a).

<sup>96</sup> Hemp seeds must be planted by April or May in order to harvest a crop. *See* KTHV, *CBD Oil Manufacturers Eye Arkansas as Potential Place to Grow Hemp* (Feb. 17, 2018).

<sup>97</sup> *See* Ark. State Plant Bd., *Regulations on the Industrial Hemp Research Program in Arkansas* (Aug. 31, 2018) (hereinafter “Ark. Hemp Regs.”).

<sup>98</sup> *Id.* § 3.



# AnimalOutlook

10 years”—from receiving a license to grow hemp.<sup>99</sup> (A similar proposed ban at the federal level has been criticized for being likely to exclude from hemp farming the very people who have prior experience growing cannabis.<sup>100</sup>) And the rules place additional impediments on hemp seeds obtained from states other Arkansas: they require that the farmer (i) receive “written approval of [a] Domestic Seed/Propagule Request” from the State Plant Board, (ii) “submit . . . THC test results” demonstrating that the seeds’ THC content is no more than the legal maximum of 0.3 percent, and (iii) arrange for delivery of the seeds to the State Plant Board in Little Rock.

<sup>101</sup> For seeds obtained from foreign countries, the requirements are even more onerous.<sup>102</sup>

Unsurprisingly, in light of the burdensome regulations adopted by the State Plant Board—and the late hour at which they were implemented—Arkansas farmers have been slow to take up the new crop. Despite anecdotal reports of interest by hemp industry representatives,<sup>103</sup> as of September 21, 2018, the State Plant Board had not yet received *any* applications from prospective growers.<sup>104</sup> If anything, statements by the State Plant Board have been actively discouraging: the State Plant Board’s website warns that “there is high risk of financial or other

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<sup>99</sup> *Id.* § 2(A)(9).

<sup>100</sup> Paschal, *Congress Finally Can Tell Hemp from Pot*, *supra* note 28.

<sup>101</sup> Ark. Hemp Regs. § 6(B).

<sup>102</sup> *Id.* § 6(C).

<sup>103</sup> *See* Bennett, *supra* note 33 (“There have been countless farmers, some of them large farmers, contact[ing] us on a daily and weekly basis.”)

<sup>104</sup> Stephen Steed, *Questions tie up state hemp study*, Ark. Democrat-Gazette, Sept. 21, 2018.

# Animal Outlook

loss at this early stage in the program” and that the state “does not offer any financial assistance to participants.”<sup>105</sup> That is hardly an endorsement to farmers interested in the new crop.

Simply put, in Arkansas—as in the rest of the United States—the status quo has proved highly unsatisfactory for the creation of a viable hemp industry. Regulatory obstacles aside, banks are unwilling to loan to farmers or processing facilities that work with an ambiguously legal product.<sup>106</sup> In April 2018, the Small Business Administration (“SBA”) barred banks from issuing SBA-backed loans to any ‘business that grows, produces, processes, distributes or sells products purportedly made from “hemp” . . . unless the business can demonstrate that its business activities and products are legal under federal and state law.’”<sup>107</sup> Local law enforcement also have raided shops selling CBD products in Indiana, Tennessee, North Dakota, and Iowa.<sup>108</sup> So long as industrial hemp continues to occupy a gray area under U.S. law, the reborn American hemp industry will fail to flourish.<sup>109</sup>

## IV. The 2018 Farm Bill

In order to solve the problems with partial legalization, McConnell and Comer—now Senate Majority Leader and a U.S. Representative from Kentucky, respectively—have pushed to

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<sup>105</sup> Ark. Agric. Dep’t, Ark. State Plant Bd., *Industrial Hemp Research Program* (Nov. 19, 2018), <https://www.agriculture.arkansas.gov/industrial-hemp>.

<sup>106</sup> Caitlin Dewey, *Congress is about to legalize cannabis. Just not the kind that gets you high*, Wash. Post, Aug. 10, 2018, <https://www.washingtonpost.com/business/2018/08/10/congress-is-about-legalize-cannabis-just-not-kind-that-gets-you-high/>; Jonathan H. Harsch, *Farm bill could give a big boost to industrial hemp industry*, Agri-Pulse (Oct. 7, 2018), <https://www.agri-pulse.com/articles/11323-farm-bill-could-give-a-big-boost-to-industrial-hemp-industry>.

<sup>107</sup> Johnson, *supra* note 9, at 28.

<sup>108</sup> Lewis, *supra* note 4; Quinton, *supra* note 66.

<sup>109</sup> Quinton, *supra* note 66.

# Animal Outlook

remove hemp from the CSA entirely. The main piece of proposed legislation has been the Hemp Farming Act of 2018,<sup>110</sup> the most important provision of which was added to the Senate’s version of the Agriculture Improvement Act of 2018 (the “2018 Farm Bill”).<sup>111</sup>

The Hemp Farming Act of 2018 would amend the Agricultural Marketing Act of 1946<sup>112</sup> to authorize the cultivation of hemp in accordance with a state plan approved by the federal Secretary of Agriculture. The bill defines hemp as “*Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.”<sup>113</sup> The bill also would amend the Federal Crop Insurance Act<sup>114</sup> to render hemp eligible for subsidized crop insurance.<sup>115</sup> Most importantly, the bill would amend the CSA by providing that “[t]he term ‘marihuana’ does not include . . . hemp” and by specifically removing the THC in hemp from Schedule I of the CSA.<sup>116</sup>

Although the Hemp Farming Act of 2018 stalled in April in both the House and the Senate, McConnell added the most significant provision—removing hemp from the CSA—into the Senate’s version of the 2018 Farm Bill. Section 12608 of the Senate’s 2018 Farm Bill duplicates section 6 of the proposed Hemp Farming Act, providing that the CSA’s “term

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<sup>110</sup> S. 2667 & H.R. 5485, 115th Cong. (2018).

<sup>111</sup> S. 3042, 115th Cong. (2018).

<sup>112</sup> 7 U.S.C. 1621 *et seq.*

<sup>113</sup> S. 2667 & H.R. 5485, § 2.

<sup>114</sup> 7 U.S.C. § 1501 *et seq.*

<sup>115</sup> S. 2667 & H.R. 5485, § 5.

<sup>116</sup> S. 2667 & H.R. 5485, § 6.

# Animal Outlook

‘marihuana’ does not include . . . hemp” and removing the THC in hemp from Schedule I.<sup>117</sup> The Farm Bill, including the hemp provisions, passed the Senate in June on an 86-11 vote.<sup>118</sup>

The House’s version of the Farm Bill did not include the hemp provisions, however. Instead, Republican leaders in the House prioritized adding work requirements for food stamp recipients, a highly controversial issue that ensured the proposed bill barely passed the House, 213-211.<sup>119</sup> Because the margin in the House was so narrow, Republican leaders were reluctant to lose even a single vote by proposing changes to the treatment of hemp.<sup>120</sup>

Since both the House and the Senate versions of the proposed Farm Bill were passed in June, the two chambers have been mired in a debate about whether to include the new work requirements for food stamps. The Senate is unwilling to support the work requirements and the House is unwilling to remove them.<sup>121</sup> As a result, the expiration of the 2014 Farm Bill came and went on September 30 without action by either chamber; Congress will need to extend the 2014 Farm Bill if a new one is not passed by the end of the year.<sup>122</sup> (The expiration of the 2014 Farm

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<sup>117</sup> S. 3042, § 12608.

<sup>118</sup> Catherine Boudreau & Liz Crampton, *Senate passes farm bill, setting up food stamp battle with the House*, Politico, June 28, 2018, <https://www.politico.com/story/2018/06/28/senate-passes-farm-bill-683232>.

<sup>119</sup> Ellyn Ferguson, *Another Farm Bill Trouble Spot: Ex-Prisoners Growing Hemp*, Roll Call, Sept. 5, 2018, <https://www.rollcall.com/news/policy/another-farm-bill-trouble-spot-ex-prisoners-growing-hemp>.

<sup>120</sup> See Brezosky, *supra* note 18.

<sup>121</sup> Olivia Paschal, *The Farm Bill and the “Assault” on Poor Families*, The Atlantic, Aug. 24, 2018, <https://www.theatlantic.com/politics/archive/2018/08/the-farm-bill-and-the-assault-on-poor-families/568441/>.

<sup>122</sup> Burns, *supra* note 14.

# Animal Outlook

Bill does not imperil the state's pilot hemp programs, because those provisions do not expire.<sup>123</sup>)

Now that Democrats are poised to control the House after the midterm elections, however, House leaders appear confident that Republicans will belatedly vote for the Senate version, rather than wait for newly-empowered Democrats to negotiate a more liberal bill.<sup>124</sup>

Hemp proponents have been confident throughout that the 2018 Farm Bill will fully legalize industrial hemp production in the United States. Immediately after the elections, McConnell told a group of reporters in Kentucky that he “guarantee[d]” that the hemp provisions “will be . . . in [the Farm Bill].”<sup>125</sup> Comer notes that legalization enjoys bipartisan support in both chambers and has been endorsed by Senate Minority Leader Charles E. Schumer (D-N.Y.).<sup>126</sup> Industry experts say that there’s “very little opposition in the House”<sup>127</sup> and that “no one [is] kicking and screaming” to maintain hemp’s illegal status.<sup>128</sup> In addition, both McConnell and Comer have seats on the conference committee that will resolve differences between the House and Senate farm bills.<sup>129</sup> As expected, on November 29, 2018, *Politico* reported that the

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<sup>123</sup> *Id.*

<sup>124</sup> Philip Brasher, *Peterson confident of lame-duck farm bill*, Agri-Pulse (Nov. 7, 2018), <https://www.agri-pulse.com/articles/11632-peterson-confident-of-lame-duck-farm-bill>.

<sup>125</sup> Jordain Carney, *McConnell says farm bill to include provision legalizing hemp*, The Hill, Nov. 9, 2018, <https://thehill.com/blogs/floor-action/senate/415966-mcconnell-says-farm-bill-to-include-provision-legalizing-hemp>.

<sup>126</sup> Dewey, *supra* note 105.

<sup>127</sup> Roseboro, *supra* note 14 (quoting Eric Steenstra, president of Vote Hemp).

<sup>128</sup> Hemp Industry Daily, *2018 Farm Bill: What to watch for: from 6 hemp industry insiders* (Sept. 4, 2018), <https://hempindustrydaily.com/2018-farm-bill-what-to-watch-for-hemp-industry/> (quoting Jonathan Miller, attorney for U.S. Hemp Roundtable).

<sup>129</sup> Nieves, *supra* note 14.

# Animal Outlook

compromise measure approved by Democratic and Republican negotiators—which is expected to be enacted into law in the coming weeks—largely tracks the Senate bill and includes McConnell’s proposal to remove hemp from the CSA.<sup>130</sup>

One more controversy regarding hemp in the 2018 Farm Bill remains to be resolved. Both versions of the Farm Bill (even the House’s version, which does not broadly legalize hemp) would prohibit anyone with a felony drug conviction from cultivating the crop.<sup>131</sup> McConnell added the ban to the Senate’s version of the Farm Bill to appease U.S. Sen. Charles E. Grassley (R-Iowa), the powerful chairman of the Senate Judiciary Committee.<sup>132</sup> Many hemp industry advocates oppose the language on both moral and practical grounds. Morally, the ban would disproportionately prevent persons of color—who have been disproportionately penalized over the course of America’s lengthy drug war—from participating the lucrative market for industrial hemp, exacerbating the inequities produced by what are increasingly perceived to be unjust laws.<sup>133</sup> Practically, the ban also would prevent the people with the greatest knowledge of cannabis cultivation—those who have grown it themselves—from joining the legal industry, likely handicapping production for industrial hemp just as it attempts to get off the ground.<sup>134</sup> At the moment, it remains unclear whether the felony drug ban will remain in the final Farm Bill. Democrats may make a renewed push to remove it if negotiations drag on into the new Congress.

## V. Prospects for Hemp Cultivation in Arkansas and the United States

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<sup>130</sup> Teaganne Finn, Erik Wasson, & Daniel Flatley, *Lawmakers Reach Farm Bill Deal by Dumping Food-Stamp Rules That Trump Backed*, Bloomberg (Nov. 29, 2018).

<sup>131</sup> Burns, *supra* note 14; Ferguson, *supra* note 118.

<sup>132</sup> Ferguson, *supra* note 118.

<sup>133</sup> See Burns, *supra* note 14.

<sup>134</sup> *Id.*; Paschal, *Congress Finally Can Tell Hemp from Pot*, *supra* note 28.

# Animal Outlook

Even if industrial hemp is finally fully legalized by the 2018 Farm Bill, challenges to widespread cultivation of the crop will remain. It may take years for federal and state regulators to fully implement the legislation: by way of comparison, the National Organic Program, which was enacted as part of the 1990 Farm Bill, was not fully implemented until 2001.<sup>135</sup> Experts believe that regulations for this crop will be completed faster, but they still anticipate that it may take 1–2 years for federal officials to finalize regulations for industrial hemp.<sup>136</sup> (Arkansas’ existing regulations, of course, took approximately 18 months to draft and approve.)

It bears emphasizing that Arkansas’ cumbersome regulatory regime for industrial hemp will not simply vanish with passage of the 2018 Farm Bill. Although the AIHA authorizes two kinds of licenses—an “industrial hemp research program grower license” and an “industrial hemp grower license,” with the latter contingent on “the authorization of legal industrial hemp growth and production in the United States under applicable federal laws relating to industrial hemp”<sup>137</sup>—the recently promulgated regulations refer only to one “license to grow.”<sup>138</sup> That either means that the current regulations govern both of the AIHA’s envisioned categories, or else that they govern only the “industrial hemp research program grower license,” in which case regulations for the “industrial hemp grower license” have not yet been promulgated. In the former scenario, Arkansas hemp growers would still need to comply with the current regulations

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<sup>135</sup> Nieves, *supra* note 14.

<sup>136</sup> Sophie Quinton, *Hemp, on the Brink of Being Legal, Still Faces Challenges*, Stateline (Sept. 26, 2018), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2018/09/26/hemp-on-the-brink-of-being-legal-still-faces-challenges>.

<sup>137</sup> Acts 2017, No. 981, § 1, *codified at* Ark. Stat. § 2-15-408(a)–(b)

<sup>138</sup> Ark. Hemp Regs. § 2(a)(1). The regulations do later divide the Grower License into two types, “Research Only” and “Research with Intent to Market,” but those both are “research” licenses and so do not match the categories in the AIHA.

# Animal Outlook

even after the enactment of the 2018 Farm Bill; in the latter, farmers might need to wait another year-and-a-half for the Arkansas State Plant Board to issue additional regulations for the “industrial hemp grower license.” Either way, further difficulties and delay are likely.

Beyond Arkansas’ baroque regulations, there are other legal obstacles to widespread cultivation of hemp. For instance, hemp is legally distinguished from marijuana by its lower THC content, but there are no national standards for THC testing.<sup>139</sup> Some states require testing of flowers—which are higher in THC—whereas others rely on a blend of different parts of the plant.<sup>140</sup> As a result, a plant may be classified as legal hemp in one state but illegal marijuana in another. The National Association of State Departments of Agriculture recently convened a working group to set common standards for THC testing, but that project is far from complete.<sup>141</sup>

State and federal agencies may remain hostile to hemp even after its legalization. At the federal level, the Bureau of Reclamation has been reported as having arbitrarily denied water to hemp farmers,<sup>142</sup> a situation that pending bills—unlikely to pass in the current Congress—would remedy.<sup>143</sup> The Small Business Administration has taken steps to prevent banks from issuing SBA-backed loans to hemp farmers and processors,<sup>144</sup> which also has produced a (hitherto ineffective) congressional response. And the USDA appears to have failed to provide any research funding for industrial hemp, even though Congress plainly appears to have envisioned

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<sup>139</sup> Quinton, *Hemp, on the Brink of Being Legal, Still Faces Challenges*, *supra* note 136.

<sup>140</sup> *Id.*

<sup>141</sup> *Id.*

<sup>142</sup> Kit O’Connell, *2018 Farm Bill Could Fully Legalize Industrial Hemp in USA*, Ministry of Hemp (July 3, 2018), <https://ministryofhemp.com/blog/2018-farm-bill/>.

<sup>143</sup> Industrial Hemp Water Rights Act, H.R. 4164, S. 1576, 115th Cong. (2017).

<sup>144</sup> Johnson, *supra* note 9, at 28.



# AnimalOutlook

such research when it enacted the 2014 Farm Bill.<sup>145</sup> If the DEA's response to the 2014 Farm Bill is any indication, then those agencies will not stop interfering with hemp cultivation simply because Congress authorizes it.

More threatening in the long-term are the market challenges for industrial hemp. Hemp shows warning signs of becoming a fad, and a sudden, dramatic influx of new farmers into the hemp market likely would drive down prices before adequate demand exists.<sup>146</sup> Moreover, only CBD really produces profits for farmers beyond those seen for other commodity crops,<sup>147</sup> and then only when relatively large quantities of hemp (upwards of 50 acres) are under cultivation.<sup>148</sup> CBD is expensive and labor-intensive to cultivate, and the FDA increasingly has cracked down on unapproved products claiming therapeutic benefits from CBD use.<sup>149</sup> CBD also is more easily harvested from marijuana than from hemp<sup>150</sup>—indeed, medicine-grade CBD is not produced from hemp seeds at all<sup>151</sup>—which may lead the former to cement itself as the favored variety of cannabis as ever more states and the federal government slowly slouch toward full legalization.

Even if hemp's attractiveness proves lasting, the decades-long ban poses many challenges for new hemp cultivators. Farmers must “re-establish agricultural supply chains, breed varieties with modern attributes, upgrade harvesting equipment, modernize processing and manufacturing,

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<sup>145</sup> *Id.* at 35.

<sup>146</sup> Dewey, *supra* note 105.

<sup>147</sup> *Id.*

<sup>148</sup> Barth, *supra* note 15.

<sup>149</sup> Johnson, *supra* note 9, at 32–33.

<sup>150</sup> Quinton, *This Extract Is Driving a Hemp Gold Rush*, *supra* note 66.

<sup>151</sup> Johnson, *supra* note 9, at 32.

# Animal Outlook

and identify new market opportunities.”<sup>152</sup> As a result, even with the explosive growth of hemp farming after the 2014 Farm Bill, only CBD currently can be produced in the United States at a level that meets demand.<sup>153</sup> Furthermore, China, Canada, and many European countries have had legal hemp industries for years and can be expected to try to maintain their current advantages from those head starts.<sup>154</sup> Already, Canada is taking steps to loosen regulatory restrictions on hemp farming as it prepares to implement its nationwide legalization of marijuana.<sup>155</sup>

Industrial hemp undoubtedly holds some promise for American farmers. But in the words of the government relations director for National Farmers Union, the new industry’s growth is more likely to “go in fits and starts” than to “take[] off and stay[] going unchecked.”<sup>156</sup> Even hemp advocates such as the chairman of the National Hemp Association acknowledge obstacles, admitting that “[w]e need to go from zero to millions of acres of fiber, and the question is how we start to build that supply chain because the largest processing equipment for hemp today only processes 14,000 acres.”<sup>157</sup> Whether the industry is able to navigate those challenges will determine whether hemp is a passing fad or a true “super-crop.”

## VI. Conclusion

Having immersed myself in literature and news reports regarding industrial hemp, I agree with the assessment by Jerome H. Cherney of Cornell University's School of Integrative Plant

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<sup>152</sup> *Id.* at 6.

<sup>153</sup> Nieves, *supra* note 14.

<sup>154</sup> Johnson, *supra* note 9, at 39.

<sup>155</sup> *Id.* at 10–11.

<sup>156</sup> Nieves, *supra* note 14.

<sup>157</sup> Paschal, *Congress Finally Can Tell Hemp from Pot*, *supra* note 28.

# Animal Outlook

Science and Ernest Small of Agriculture and Agri-Food Canada: “The promise of industrial hemp is somewhere between ‘Hemp is just a stalking horse for marijuana’ and ‘Hemp can save the planet.’”<sup>158</sup> The crop undeniably shows promise for some American farmers, particularly as demand for CBD and other cannabinoids for medicinal use is expected to increase. Nevertheless, hemp has been subject to excessive “hype” as a novel super-crop.<sup>159</sup> Even Cherney’s and Small’s most generous projection for hemp concludes that it will be widely cultivated in only eight to twelve states,<sup>160</sup> far fewer than the 39 that had legalized hemp as of August 2018.<sup>161</sup>

In order for hemp to succeed as a transitional crop, transitioning farmers will need to eliminate downside risk by negotiating advanced contracts with large purchasers. Farmers should also try to ensure profitability of the crop by devoting as much land to hemp as possible: 50 acres (about 20 hectares) appears to be about the minimum required to turn a profit. If an individual farm does not have enough space available to devote to hemp, then it may be necessary to aggregate the output of several farms in order to achieve profitable economies of scale. Transitioning farmers must be aware of the risks of hemp cultivation even as they begin to explore the potential of that revitalized crop.

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<sup>158</sup> Cherney & Small, *supra* note 2, at 75.

<sup>159</sup> *Id.* at 76.

<sup>160</sup> Cherney & Small, *supra* note 2, at 75.

<sup>161</sup> Nat’l Conf. of State Legislatures, *State Industrial Hemp Statutes* (Aug. 8, 2018).