

HEMP: HOW THE COMEBACK CROP IS BUDDING IN THE BLUEGRASS

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INTRODUCTION

Industrial hemp could be a successful mechanism for Kentucky to serve as an agricultural innovator.¹ Hemp can be grown for its fiber, seed, or oil, and these mediums are used in a variety of ways.² Additionally, hemp has economic, environmental, agricultural, and nutritional benefits.³ Due to hemp's close relationship to marijuana, however, federal obstacles have created uncertainty for its future.⁴ Despite federal complexity, Kentucky has demonstrated its desire to cultivate and process hemp through its expanding Industrial Hemp Research Pilot Program (IHRPP).⁵ Kentucky's legislature recently declared a desire to promote the expansion of the Commonwealth's industrial hemp industry to the "maximum extent permitted by federal law" and to "move the Commonwealth and its citizens to the forefront of the industrial hemp industry."⁶

Industrial hemp was widely grown in the United States until the mid-1880s, during which Kentucky established itself as the leading hemp producer in the United States.⁷ Following the Civil War, hemp production declined due to the Marihuana Tax

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¹ Cheryl Kaiser & Christy Cassady, *Industrial Hemp—Legal Issues*, UNIV. OF KY. COLL. OF AGRIC., FOOD AND ENV'T (2015), <http://www.uky.edu/ccd/sites/www.uky.edu/ccd/files/hemplegal.pdf> [<http://perma.cc/3GUH-BASX>].

² Cheryl Kaiser et al., *Industrial Hemp Production*, UNIV. OF KY. COLL. OF AGRIC., FOOD AND ENV'T (Sept. 2015), <http://www.uky.edu/ccd/sites/www.uky.edu/ccd/files/hemp-production.pdf> [<http://perma.cc/VEX4-JRUN>] [hereinafter Kaiser, et al.].

³ *Hemp 101*, KY. HEMPSTERS, <https://www.kyhempsters.com/hemp101> [<http://perma.cc/83VK-F3NA>].

⁴ Kaiser & Cassady, *supra* note 1.

⁵ See *Kentucky Hemp Pilot Program*, KY. HEMPSTERS, <https://www.kyhempsters.com/kentuckyhemppilotprogram> [<http://perma.cc/L7JQ-UYGR>].

⁶ KY. REV. STAT. ANN. § 260.852(2) (LexisNexis 2018).

⁷ Kaiser & Cassady, *supra* note 1.

Act of 1937.⁸ Thereafter, the Controlled Substances Act of 1970 classified all forms of cannabis, including hemp, as a Schedule I drug, making it illegal to grow in the United States.⁹

Despite the long-term prohibition, the hemp industry has slowly been revived, with Kentucky leading the charge.¹⁰ Beginning with Section 7606 of the Agricultural Act of 2014, commonly known as the Farm Bill, authorized states that had legalized hemp to develop pilot programs for industrial hemp research through their agriculture departments.¹¹ The industrial hemp research provision has been interpreted to have “some degree of permanence.”¹² Following the passage of the Farm Bill, thirty-nine states enacted laws creating or allowing for the establishment of industrial hemp research or pilot programs.¹³

On December 20, 2018, the Agricultural Improvement Act of 2018 was signed into law and incorporated into the 2018 Farm Bill.¹⁴ The Act amends the 2014 Farm Bill and removes industrial hemp from the controlled substance list.¹⁵ The new law broadened the definition of industrial hemp to include the whole plant and recognized it as an agricultural commodity, also declaring that the states nor the DEA may prohibit interstate transport of hemp.¹⁶ The 2018 Farm Bill delegates authority to the states to regulate hemp, provided the USDA approves the state’s plan to monitor and regulate the crop.¹⁷ The 2018 Farm Bill also removes barriers to

⁸ *Id.*

⁹ *Hemp 101*, *supra* note 3.

¹⁰ Kaiser & Cassady, *supra* note 1.

¹¹ Agricultural Act of 2014, Pub. L. No. 113-179, 128 Stat. 912. § 7606(a)(1)-(2) (2014) (as codified as amendment at 7 U.S.C. § 5940), https://agriculture.house.gov/sites/republicans.agriculture.house.gov/files/pdf/legislation/final_agact2014.pdf [<http://perma.cc/S8RB-2XVX>].

¹² RENÉE JOHNSON, CONG. RESEARCH SERV., RL32725, HEMP AS AN AGRICULTURAL COMMODITY 15 (Jun. 22, 2018), <https://fas.org/sgp/crs/misc/RL32725.pdf> [<http://perma.cc/WP5S-PH59>].

¹³ NAT. CONFERENCE OF STATE LEGISLATORS, STATE INDUSTRIAL HEMP STATUTES, STATE ACTION (Aug. 8, 2018), <http://www.ncsl.org/research/agriculture-and-rural-development/state-industrial-hemp-statutes.aspx> [<http://perma.cc/X4HN-4NGB>].

¹⁴ Agricultural Improvement Act of 2018, Pub. L. No. 115-334, 128 Stat. 668. (2018) <https://www.congress.gov/bill/115th-congress/house-bill/2/text> [<https://perma.cc/2FEX-ZKXM>].

¹⁵ *Id.* at § 12619(a)(B).

¹⁶ *Id.* at § 10114; § 12619; § 11101; § 11119.

¹⁷ *Id.* at § 10113.

financial institutions and federal crop insurance.¹⁸ Although the 2018 Farm Bill removes hemp from the controlled substance list, no person can grow, handle, or process hemp plants, seeds, or other derived materials in Kentucky without a license from the KDA.¹⁹

The Kentucky Department of Agriculture (KDA) conducts an Industrial Hemp Research Pilot Program (IHRPP) authorized by 7 U.S.C. § 5940 and KRS § 260.852.²⁰ Before the enactment of the pilot program, no industrial hemp had been grown in Kentucky since 1949.²¹ Kentucky responded enthusiastically to the enactment by nearly tripling the number of acres approved to harvest hemp than in 2016.²²

Industrial hemp is a variety of *Cannabis sativa* and is of the same plant species as marijuana.²³ Industrial hemp is defined as “the plant *Cannabis sativa* L. and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol [(THC)] concentration of not more than 0.3 percent on a dry weight basis.”²⁴ Industrial hemp refers to cannabis varieties that are primarily grown as an agricultural crop.²⁵ In contrast, marijuana refers to the flowering tops and leaves that have a much higher THC content, which is marijuana’s primary psychoactive chemical.²⁶ THC levels for marijuana average range from three to fifteen percent.²⁷ Thus, hemp consumption does not result in the user “getting high” because the low level of THC results in the body processing it faster than it can be smoked or otherwise ingested.²⁸

¹⁸ *Id.* at § 11101; § 10113.

¹⁹ KY. REV. STAT. ANN. § 260.858(3) (LexisNexis 2017).

²⁰ *Industrial Hemp Research Pilot Program Overview*, KY. DEP’T AGRIC. (2018) [hereinafter *Pilot Program Overview*], <http://www.kyagr.com/marketing/hemp-overview.html> [<http://perma.cc/E8ZS-7YML>].

²¹ Don Sergent, *High on Hemp: New Crop Slowly Makes Inroads with Local Farmers*, BOWLING GREEN DAILY NEWS (Oct. 19, 2017), http://www.bgdailynews.com/news/high-on-hemp-new-crop-slowly-makes-inroads-with-local/article_656b2859-dccb-55f6-9c7c-229b350126b1.html [<http://perma.cc/CCG5-8BFL>].

²² See Press Release, Ky. Dep’t Agric., KDA Approves More Than 12,800 Acres for Hemp Planting in 2017 (Jan. 5, 2017), <http://www.kyagr.com/Kentucky-AGNEWS/press-releases/KDA-approves-more-than-12800-acres-for-hemp-planting-in-2017.html> [<http://perma.cc/R3UF-L5QF>].

²³ Kaiser & Cassidy, *supra* note 1.

²⁴ 7 U.S.C. § 5940(b)(2) (LexisNexis 2018).

²⁵ *Hemp 101*, *supra* note 3.

²⁶ JOHNSON, *supra* note 12 at 21, 27.

²⁷ Kaiser, et al., *supra* note 2.

²⁸ *Hemp 101*, *supra* note 3.

To illustrate, some have analogized hemp's relation to marijuana is by likening it to sweet corn: sweet corn (marijuana) has a higher sugar content than field corn (industrial hemp) which is higher in starch (other cannabinoids).²⁹ However, because the two plants are virtually indistinguishable by appearance and can only be deduced by a chemical analysis of the THC content, enforcement of industrial hemp growth is an important issue considered by the public and policymakers.³⁰

In 2017, the United States was one of the only industrialized nation that did not allow industrial hemp production.³¹ Despite industrial hemp's illegality, the United States recognized its usefulness, illustrated by the approximate 78.1 million dollars of imports in 2015.³² This is not surprising considering the global market for hemp consists of more than 25,000 products in markets ranging from textiles to food.³³ Hemp has the ability to be "economically viable and sustainable" for Kentucky farmers.³⁴ The Bluegrass has high hopes for success because Kentucky's pilot program is one of the largest in the nation.³⁵ Further, preliminary studies have indicated "Kentucky's soil, climate, and growing season may give the Bluegrass state a locational advantage."³⁶ Therefore, hemp has the potential to facilitate jobs in the Bluegrass and serve as an agritourism mechanism, much like bourbon distilleries that incentivize citizens to learn about the product, while simultaneously putting money in the farmer's pocket.

²⁹ D.W. Williams & Rich Mundell, *An Introduction to Industrial Hemp, Hemp Agronomy, and UK Agronomic Hemp Research*, UNIV. KY. COLL. OF AGRIC., FOOD AND ENV'T, https://hemp.ca.uky.edu/sites/hemp.ca.uky.edu/files/uk_ih_information_for_agents3.pdf [http://perma.cc/R6NG-P5N4].

³⁰ *Hemp Legal Status*, PURDUE UNIV. (2015), <https://purduehemp.org/hemp-legal-status/> [http://perma.cc/ZGH6-NN8R].

³¹ *Hemp 101*, *supra* note 3.

³² JOHNSON, *supra* note 12, at 4.

³³ *Id.* at 2.

³⁴ Matt Markgraf & Nicole Erwin, *Kentucky Hemp is Poised for Progress but Uncertainty Remains*, WKMS (July 31, 2017), <http://wkms.org/post/kentucky-hemp-poised-progress-uncertainty-remains> [http://perma.cc/7W26-MGR8].

³⁵ *See* JOHNSON, *supra* note 12, at 11 (chart 2).

³⁶ *Economic Considerations for Growing Industrial Hemp: Implications for Kentucky's Farmers and Agricultural Economy*, UNIV. KY. COLL. OF AGRIC., FOOD AND ENV'T 13 (July 2013), <https://www.uky.edu/Ag/AgEcon/pubs/reshempimpfarmer28.pdf> [http://perma.cc/QVX9-MXFV].

This Note attempts to demonstrate how Kentucky can be a leading innovator of industrial hemp under its current laws. Part I explains that by focusing on its pilot program, Kentucky can expand its research results by amending the program to allow more applicants to participate. Part II explores enforcement issues and arguments against hemp cultivation and maintains that Kentucky can resolve and minimize the concerns through its pilot program. Part III explains that Kentucky has the “seeds” to attract sufficient investment to ensure hemp will succeed in the Bluegrass because of its locational advantage, crop diversification, employment effects, and agritourism benefits. Part IV argues that the Kentucky legislature’s dedication to reform and research will offer stability to farmers at the federal and state level.

I. EXPANSION OF KENTUCKY’S PILOT PROGRAM WILL LEAD TO HIGH HOPES

In 2017, the KDA’s pilot research program consisted of five universities, 252 applicants, and more than 12,800 acres of hemp cultivation in seventy-one Kentucky counties.³⁷ Kentucky’s Agriculture Commissioner Ryan Quarles has said he plans to use the KDA’s pilot program “to encourage the industrial hemp industry to expand and prosper in Kentucky.”³⁸ 2017 was the largest growing season yet with 204 approved growers planting 3,200 acres of hemp.³⁹ When the program began in 2014, farmers collectively planted 33 acres hemp.⁴⁰ During the following year, farmers planted 922 acres.⁴¹ Then in 2016, 137 participants planted more than 2,350 acres of hemp in Kentucky.⁴² The growth demonstrates a lucrative cash opportunity in hemp with growth potential that has been likened to Silicon Valley industries.⁴³

Industrial hemp contains a class of compounds called phytocannabinoids, which are produced primarily in the hemp

³⁷ *Pilot Program Overview*, *supra* note 20.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ Markgraf, *supra* note 34, at 10.

flower.⁴⁴ Kentucky's primary research focus for floral hemp production is cannabidiol or CBD (hemp oil), one of the many compounds of phytocannabinoids, which are known to have strong pharmaceutical effects.⁴⁵ Nearly sixty percent of the reported acreage in 2016 was dedicated to phytocannabinoid research.⁴⁶ A Kentucky businessman, John Taylor, attested to the tremendous pharmaceutical effect, which he believed in so much so that Taylor used the Commonwealth's industrial research program to generate his business model.⁴⁷ Taylor points to the fact that the government issued a patent for cannabinoids as antioxidants and neuroprotectants as proof that he is not the sole believer in the products medical value.⁴⁸

The KDA can expand the pilot program through administrative regulations to increase its success and yields.⁴⁹ The agency has the authority to promulgate administrative regulations to prescribe rules for any industrial hemp pilot program in the Commonwealth.⁵⁰ This power includes the ability to license persons who wish to participate and to prescribe rules for a public university's participation.⁵¹ Additionally, the Kentucky legislature instituted the Industrial Hemp Advisory Board to ensure guidance and expertise are readily available for a licensee with respect to plans, policies, and procedures applicable in the administration of the pilot program.⁵² Although the KDA is facilitating the success of the program by ensuring a smooth administrative process,⁵³ it should also use its authority to break down obstacles for farmers and potential participants.

⁴⁴ *2018 Kentucky Industrial Hemp Research Pilot Program*, KY. DEPT. AGRIC. (Aug. 30, 2018), [http://www.kyagr.com/marketing/documents/HEMP_OV_Hemp-Brochure_2018\(Apr\).pdf](http://www.kyagr.com/marketing/documents/HEMP_OV_Hemp-Brochure_2018(Apr).pdf) [<http://perma.cc/KVX5-JBYB>].

⁴⁵ Williams & Mundell, *supra* note 23, at 2; *see also id.* at 2.

⁴⁶ Markgraf, *supra* note 34, at 16.

⁴⁷ *Id.* at 7.

⁴⁸ *Id.* at 7-9; *see also* U.S. Patent No. 6630507 (issued Oct. 7, 2013) available at <https://www.google.com/patents/US6630507> [<http://perma.cc/6YLK-AUFU>].

⁴⁹ KY. REV. STAT. ANN. § 260.862 (LexisNexis 2017).

⁵⁰ KY. REV. STAT. ANN. § 260.862(1)(a) (LexisNexis 2017).

⁵¹ *Id.* § 260.862(1)(c)-(d).

⁵² *Id.* § 260.860(1).

⁵³ *Industrial Hemp Research Pilot Program 2017 Policy Guide*, KY. DEP'T AGRIC. iv (last updated Oct. 11, 2016), http://www.kyagr.com/marketing/documents/HEMP_Policy-Guide_2017.pdf [<http://perma.cc/9BK7-SPMY>] [hereinafter *Policy Guide*].

A. How to Attract More Applicants

The KDA's IHRPP 2017 policy guide serves as a governing tool for applicants.⁵⁴ The application requires a research plan that includes a proposed number of acres to be planted, a declaration of previous farming experience, and a letter of intent from a processor.⁵⁵ Further, in assessing applications, KDA considers the applicant's home in relation to its growing facility.⁵⁶ While all of these requirements attempt to ensure a productive season and sustainable yield, they also inhibit and restrict others from participating. Considering the fact that the vast majority of costs associated with the program are the responsibility of the participant, the stringent applicant requirements are arguably superfluous. An applicant has a high risk of loss and essentially unlimited liability as a participant. Thus, because of the limited production knowledge in the field, uncertain profit yields, and a new federal regulatory scheme, Kentucky's IHRPP should widen its net to catch more willing applicants.

In expanding Kentucky's pilot program, the KDA should look to other states and their respective industrial hemp pilot programs. For starters, the KDA can stop strenuously controlling the ability to grow industrial hemp. New York's legislature, for example, recognized the frivolity of such limitations and lifted its cap on the total number of pilot participants, which permitted any and all willing farmers to pursue industrial hemp.⁵⁷ Although the KDA does not specifically limit the number of participants, requiring a willing participant to have sufficient farming experience along with an impeccable application to participate is overreaching.⁵⁸ Further, requiring an applicant live within fifty miles of where they would grow restricts those who would commute or have multiple residences.⁵⁹ Ky. Rev. Stat. Ann. § 260.858(2) states, "it is lawful for a licensee, or his or her agent, to cultivate, handle, or process industrial hemp or industrial hemp

⁵⁴ *Id.* at 1.

⁵⁵ *Id.* at 3.

⁵⁶ *Id.* at 5.

⁵⁷ N.Y. AGRIC & MKTS. LAW § 506 (Consol. 2017) (amendment notes).

⁵⁸ *Policy Guide*, *supra* note 53 at 5.

⁵⁹ *Id.*

products in the Commonwealth,” so the residential technicality bars applicants even if their agents are sufficiently near the location to tend to the crop.⁶⁰ These limitations are contrary to the principles of Kentucky’s pilot program, which is to provide freedom, flexibility, and latitude for participants to try new methods.⁶¹

The KDA’s ten-year license ban for any person convicted of a felony or any drug-related misdemeanor or violation⁵⁶ is also overly harsh. Considering the lengthy application process—which demands a meticulous plan, unlimited liability, and formal consent to searches of the farmer’s property the applicant is subjected to—one might reasonably conclude the ten-year ban is redundant.⁶² Before issuing a license, the KDA employs safeguards to ensure a thorough review of applications, which includes an annual criminal background check, with the applicant paying the fee.⁶³ However, it is reasonable to retain the license ban for any drug-related violations considering that it is possible to disguise marijuana as hemp.⁶⁴ The restriction on felony conviction bars applicants who may have difficulty finding other jobs, whereas cultivating hemp may be a practical option for those with prior non-drug related felony convictions. Since the KDA has full discretion regardless,⁶⁵ it does not inhibit the program’s purpose to remove the ban and open the door to more applicants.

In minimizing its stringent application requirements, the KDA could adopt a scheme that limits applicants without operating as a total barrier. For example, Colorado does not bar individuals with past criminal violations from applying, but certain provisions do bar applicants with previous violations in the program.⁶⁶ Colorado sets a reasonable limit of three years within which the department may deny a new application for registration

⁶⁰ KY. REV. STAT. ANN. § 260.862(2)(e) (LexisNexis 2017).

⁶¹ *Policy Guide*, *supra* note 53, at iv.

⁵⁶ KY. REV. STAT. ANN. § 260.862(2)(e) (2017).

⁶² *See Policy Guide*, *supra* note 53, at 3-7.

⁶³ *Id.* at 6-7; *see also* KY. REV. STAT. ANN. § 260.862(2)(d) (LexisNexis 2017).

⁶⁴ *See* Bill Estep, *Police Used Hidden Video Camera, Microchips to Track Marijuana Found at Ex-Sheriff’s Farm*, LEXINGTON HERALD-LEADER (Sept. 18, 2017), <http://www.kentucky.com/news/local/crime/article173933356.html> [http://perma.cc/AZ3B-W73M].

⁶⁵ *Policy Guide*, *supra* note 53, at 2.

⁶⁶ COLO. REV. STAT. § 35-61-107 (2017).

if the applicant's registration was formerly suspended, revoked, or relinquished.⁶⁷ Likewise, Arkansas places a time limit of five years if an applicant's license has been revoked before he or she may re-apply.⁶⁸ Kentucky's code could even mirror a statute similar to Pennsylvania's, which only bars the application of persons with a felony drug conviction within the past ten years, not simply any felony.⁶⁹ The KDA "must work closely with federal, state, and local law enforcement officials to devise and oversee [a research pilot program] that encourages continued expansion of the of industrial hemp production while also effectively upholding laws prohibiting marijuana and other illegal drugs."⁷⁰ The safeguards in place are incredibly stringent, and thus, allowing more applicants by modifying some of the strict requirements will not hinder the program's success or overly burden the KDA's responsibilities.

B. Prohibiting Expansion

The KDA's Policy Guide lists prohibited activities that prevent the general public from being educated about hemp,⁷¹ including the unapproved transportation of live plants to county fairs and educational events.⁷² In addition, participants are prohibited from allowing unsupervised public access to hemp plots such as a hemp maze.⁷³ These prohibitions do not serve to promote the expansion of the Commonwealth's industrial hemp industry.⁷⁴ On the other hand, documents generated in the program, from the initial applications, agreements, and forms, as well as the subsequent reports, may be subject to the Kentucky Open Records Law; thus, implicitly subjecting participants to liability.⁷⁵ This could be problematic, for example, if GPS coordinates were

⁶⁷ *Id.*

⁶⁸ ARK. CODE ANN. § 2-15-411(a)(1)-(2) (2017).

⁶⁹ 3 PA. CONS. STAT. § 704(c)(7) (2017).

⁷⁰ *Policy Guide*, *supra* note 53, at iv.

⁷¹ *Id.* at 10.

⁷² *Id.*

⁷³ *Id.*

⁷⁴ KY. REV. STAT. ANN. § 260.852(2) (LexisNexis 2017).

⁷⁵ *Policy Guide*, *supra* note 53, at 11; *see also* KY. REV. STAT. ANN. §§ 61.870-61.884 (LexisNexis 2017).

released, exposing the participant's land to trespass—which in turn subjects the participant to being in violation of the program.⁷⁶

To prevent such inequitable occurrences, the KDA should follow the state of Washington's footsteps and allow all data, records, and information from a license application to be exempt from disclosure.⁷⁷ Exposure of the pilot program and the benefits of industrial hemp for producers and consumers is advantageous, but should be limited to protect participants and their crop. Because the requisite authorities have the GPS coordinates, nothing is lost by protecting participants' crop location from the general public.⁷⁸ In order to move Kentucky to the forefront of the industry, general widespread knowledge should be encouraged and facilitated by the KDA in a responsible manner, not arbitrarily restricted.

C. Pesticide Use

The KDA does not allow its participants to use pesticides on their industrial hemp crop.⁷⁹ A pesticide is deemed to be “any substance used to kill, repel, or control certain forms of microbial, plant, or animal life that are considered to be pests.”⁸⁰ However, properly licensed universities and colleges are an exception to this rule and may research pesticide use on industrial hemp with KDA approval.⁸¹ The KDA maintains the authority to test any hemp material for pesticide residues, with or without cause, and with or without advance notice.⁸² If any part of the crop is found to contain pesticide residue, the crop may be forfeited or destroyed, without compensation.⁸³ In order to attract more participants and allow farmers to prosper, the pilot program should allow regulated pesticide use to better address pest management concerns.⁸⁴

⁷⁶ *Policy Guide*, *supra* note 53, at 10.

⁷⁷ WASH. REV. CODE ANN. § 15.120.050(7) (LexisNexis 2017).

⁷⁸ *Policy Guide*, *supra* note 47, at 3.

⁷⁹ *Id.* at 9.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.* at 6, 9.

⁸³ *Id.* at 7.

⁸⁴ *See generally* KY. REV. STAT. ANN. § 260.862(1) (LexisNexis 2017).

The Environmental Protection Agency (EPA) governs pesticide use on all crops.⁸⁵ Under federal law, a pesticide may only be used on a crop or site for which it is specifically labeled.⁸⁶ The 2018 Farm Bill failed to address pesticide use and regulations, however, it is expected private sector companies will develop the appropriate products and apply for EPA approval.⁸⁷ Nevertheless, Washington and Colorado have developed temporary lists of pesticides for hemp “acceptable” for production under state guidelines.⁸⁸ These pesticides are presumptively harmless considering their use on other crops. For instance, Colorado regulations requires the pesticides used on hemp to also be used on tobacco.⁸⁹ Additionally, Colorado legitimizes the use of particular registered pesticides if the label has broad language allowing the use of the pesticide on the application site and expressly allows use on crops intended for human consumption.⁹⁰ Allowing pesticide use for participants, not just universities, may be a feasible way for the KDA to expand its program.

The EPA has acknowledged that there are pesticides with labels listing industrial hemp among the crops.⁹¹ FB Sciences, Inc., a pesticide that lists industrial hemp as a crop, was approved by the EPA in 2015 and registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).⁹² Since this pesticide is approved for use on hemp by the EPA, if Kentucky would approve

⁸⁵ *The Pesticide Conundrum with Hemp*, COLO. ST. UNIV., <http://webdoc.agsci.colostate.edu/hempinsects/PDFs/Introduction%20The%20Pesticide%20Conundrum%20with%20Hemp.pdf> [<https://perma.cc/ZM9H-DD8F>].

⁸⁶ *Id.*

⁸⁷ *2018 Farm Bill & Hemp in Kentucky*, KY. DEP’T AGRIC. (2018) [hereinafter *2018 Farm Bill*] http://www.kyagr.com/marketing/program_id/70/documents/HEMP_OV_2018FarmBillHempinKY.pdf [<https://perma.cc/N8ZM-ZK67>].

⁸⁸ *Pesticide Conundrum*, *supra* note 85.

⁸⁹ *Id.*

⁹⁰ *Factual and Policy Issues Related to the Use of Pesticides on Cannabis*, COLO. DEP’T AGRIC. 4, <https://www.colorado.gov/pacific/sites/default/files/atoms/files/2-2016%20Factual%20and%20Policy%20Issues%20Related%20to%20the%20Use%20of%20Pesticides%20on%20Cannabis.pdf> [<https://perma.cc/5Y5E-Y4XF>].

⁹¹ *Cannabis Status Update PPDC Meeting*, U.S. ENVTL. PROT. AGENCY, (Nov. 1, 2017) <https://www.epa.gov/sites/production/files/2017-10/documents/session-5-cannabis-status-update.pdf> [<https://perma.cc/V24W-LSHU>].

⁹² *Notice of Pesticide*, U.S. ENVTL. PROT. AGENCY (April 15, 2015), https://www3.epa.gov/pesticides/chem_search/ppls/084846-00011-20150415.pdf [<https://perma.cc/CVK2-E68S>].

such use, the pilot program participants would be in compliance with federal law because the pesticide would be used according to its label.⁹³ The state of Washington provides a list of pesticides online that fit its state criteria for use on industrial hemp, which eases the burden on participants and would be an easy practice for the KDA to emulate until the pesticide industry receives approval from the EPA.⁹⁴ There are many reasons the KDA should be cautious and to err on the side of safety concerning pesticide regulations, but to impose stringent requirements without a basis in science cannot be justified.⁹⁵ Regulations should allow leeway to growing pesticide practices and research that would help the KDA better understand the impact of pesticides.⁹⁶ The KDA should allow limited pesticide use, which would only maximize research objectives and could possibly produce increased yields.

The KDA bans the use of pesticides on industrial hemp and requires the participant to pay for all pesticide tests on the plants after the first one.⁹⁷ This poses many problems for farmers who use pesticides on other crops they grow. For instance, pesticide residue can spread by weather forces,⁹⁸ which leaves the farmer vulnerable to a violation of the program—regardless of whether the pesticide is safe for human consumption. If found to be in violation of the program, the farmer may have to pay \$150 to test for pesticide residue each time the KDA requires, as it is well within the department’s discretionary authority.⁹⁹ To avoid such groundless outcomes, the KDA should mirror the schemes employed by

⁹³ See 7 U.S.C. §136v (“A state may only regulate to the extent not inconsistent with federal law”).

⁹⁴ *Criteria for Pesticides Used for the Production of Industrial Hemp in Washington*, WASH. ST. DEP’T AGRIC. PESTICIDE MGMT. DIV. (Aug. 2017), <https://agr.wa.gov/FP/Pubs/docs/567-c.CriteriaPesticideUseOnIndustHemp.pdf> [<https://perma.cc/ZM9H-DD8F>]; see also Pesticide Information Center Online Databases (PICOL), WASH. ST. UNIV., <http://cru66.cahe.wsu.edu/LabelTolerance.html> [<https://perma.cc/KB5W-RX9G>] (establishing a searchable database of pesticides).

⁹⁵ Adrian Devitt-Lee, *Cannabis Pesticide Regulations Need Rethink*, U.S. INDUSTRIAL HEMP (May 5, 2017), <https://usindustrialhemp.wordpress.com/tag/pesticide-free/> [<https://perma.cc/6HKW-XNCV>].

⁹⁶ *Id.*

⁹⁷ *Policy Guide*, *supra* note 53, at 9.

⁹⁸ Abbie Fentress Swanson, *What is Farm Runoff Doing to the Water? Scientists Wade In* (July 5, 2013), <https://www.npr.org/sections/thesalt/2013/07/09/199095108/> [<https://perma.cc/5WBE-K468>].

⁹⁹ *Policy Guide*, *supra* note 53, at 6-7, 9.

Colorado and Washington and authorize the use of pesticide on industrial hemp for research purposes.

D. Redundancies and Inconsistencies for Growers and Processors

Hemp cultivation attracts investments that require the expansion of KDA regulations.¹⁰⁰ The KDA pilot program has admitted more than seventy processors and is developing infrastructure with sufficient capacity to process hemp grown by farmers across Kentucky.¹⁰¹ Processors “include, but are not limited to, entities acquiring raw hemp materials [that process] them into products. A ‘small processor’ is defined as any processor who sources material from up to two (2) farmers. A ‘large processor’ is defined as any processor who sources materials from three (3) or more farmers.”¹⁰² The KDA restricts the growth of processors through its regulations by imposing a \$400 fee for “small” processors, and a \$600 increase for “large” processors that sources material from one additional farmer.¹⁰³ Commissioner Quarles believes processors are essential for Kentucky to prevail as national leaders in the industry, so the KDA must relax its regulations to attract future investment.¹⁰⁴

The KDA could maximize the benefits derived from the program if it would shift its focus to the amount of hemp sold to a processor, not the number of farms. This could equip the processors to focus on the potential profit, as opposed to the present disincentive to strive to expand their processing capabilities by working with more farmers. Furthermore, it would eliminate redundant requirements and tasks that place administrative burdens on growers, processors, and department staff, which is an express goal of the KDA.¹⁰⁵ In order for farmers to prosper, they must have sufficient opportunities to sell to processors who are inclined to accept their business.¹⁰⁶ However, the KDA restricts

¹⁰⁰ *Pilot Program Overview*, *supra* note 20.

¹⁰¹ *Id.*

¹⁰² *Policy Guide*, *supra* note 53, at 12.

¹⁰³ *Id.* at 17.

¹⁰⁴ *Id.* at iii.

¹⁰⁵ *Id.* at iv.

¹⁰⁶ *Id.* at 1.

what a grower may sell to a processor outside the program.¹⁰⁷ Some of the materials eligible for sale outside the KDA program include “denuded whole stalks, bast or hurd fibers, dehulled or crushed grain, and extracted phytocannabinoid compounds (excluding THC) from floral materials.”¹⁰⁸ Essentially, processors may only sell THC-free material outside of the program, thereby restricting expansion.¹⁰⁹ The KDA should allow growers to sell THC material to processors outside of the pilot program.

Additionally, an amendment to the Omnibus Appropriations Act of 2016 “essentially restricts the DEA’s use of funds on certain activities as they relate to the cultivation of hemp, pursuant to the 2014 Farm Bill.”¹¹⁰ Specifically, DEA appropriations cannot be used in contravention of the Farm Bill, nor can it be used to hinder the production of industrial hemp with respect to the transportation, process, sale, or use of, if grown or cultivated in accordance with the Farm Bill, within or outside the state where hemp is grown or cultivated.¹¹¹ Because of the limitations placed on the DEA, the KDA should permit growers to seek out-of-state processors because it would promote competition in the market place, which could attract continued investment.

In order to eliminate redundant requirements, the KDA should also allow a grower who wants to self-process the hemp they grow to only be required to submit one application, and vice versa.¹¹² Considering the grower and processor retains all the risks and remains at the mercy of the KDA’s discretion, the additional application is unnecessary. This requirement inhibits growers and processors from experimenting. It mandates processors either focus on one aspect of the hemp industry or pay a significant amount for the KDA to review an almost identical application and background check.

Another redundant inconsistency includes the requirement that growers have prior farming experience before applying yet, no

¹⁰⁷ *Id.*

¹⁰⁸ *Policy Guide*, *supra* note 53, at 2.

¹⁰⁹ *Id.*

¹¹⁰ *Industrial Hemp from Seed to Market*, CORNELL UNIV. (May 2017), <http://csetompkins.org/resources/industrial-hemp-from-seed-to-market> [<http://perma.cc/XW7L-4PRB>] [hereinafter *Industrial Hemp*].

¹¹¹ *Id.*

¹¹² *Policy Guide*, *supra* note 53, at 4.

similar experience requirement exists for processors.¹¹³ Further, processors are only required to submit general information in their marketing plan and do not have to provide specific names or locations of buyers,¹¹⁴ whereas a marketing plan for a grower must include a letter of intent from a processor.¹¹⁵ As long as they have “plans” to quickly acquire adequate facilities to complete their research plan, the processor is not required to have those facilities at the time of application.¹¹⁶ However, a grower must submit GPS coordinates for their application to even be considered.¹¹⁷ These requirements are inconsistently restrictive in light of the expansive purpose of the pilot program.¹¹⁸

The KDA’s process also disincentivizes processors from seeking out additional investment. The application’s upcharge of \$600 between processing material from two farmers to three farmers does not incentivize a processor to seek growth.¹¹⁹ Because the KDA and any other federal, state, and local law enforcement agencies “may enter into any premises where hemp or hemp products are located, with or without advance notice, with or without cause,” no liability will ensue by allowing one application to represent both growers and processors because the application process is so transparent.¹²⁰ By reducing the redundant requirements for processors and growers, the KDA can open the door to more potential applicants.

The unlimited liability and increasing expenses of participation in the program have successfully established safe and regulated hemp production, but in order to stimulate growth and foster development, the KDA should ask the legislature to allot public funds toward the success of the program. This is well within the purpose of the program, which is to promote the expansion of the Commonwealth’s industrial hemp industry, and this could decrease participation costs.¹²¹ New York has taken a major step

¹¹³ *Id.* at 3, 12.

¹¹⁴ *Id.* at 13.

¹¹⁵ *Id.* at 4.

¹¹⁶ *Id.* at 15.

¹¹⁷ *Id.* at 3.

¹¹⁸ *Policy Guide, supra* note 53, at 4.

¹¹⁹ *Id.*

¹²⁰ *Id.* at 9.

¹²¹ KY. REV. STAT. ANN. § 260.852(2) (LexisNexis 2017).

in its use of public funds, for example, by setting aside \$650,000 for a hemp processing plant and an additional \$2 million in the 2018 budget for a state-run hemp seed certification program.¹²² Additionally, to prepare for the estimated \$3.2 million industrial hemp processing facility, New York allocated \$650,000 of the 2019 budget to the project.¹²³ New York also uses protective practices, some of which ensure farmers have access to high-quality product while easing the administrative burden on farmers, simply by importing thousands of pounds of industrial hemp seed.¹²⁴ Also, “New York ... will invest an additional \$2 million in a seed certification and breeding program, in order to begin producing unique New York seed.”¹²⁵ New York clearly understands the potential of industrial hemp and is fostering infrastructure development to ensure success if hemp is legalized. The Commonwealth should mimic New York’s approach if it wants to properly serve its stated purpose.

E. Hemp Seed

The KDA should establish a certified hemp seed to foster research development, minimize costs, and reduce Kentucky’s dependence on other sources. “A pedigree seed supply is crucial to maintain[ing] the uniformity and consistency of a large-scale, machine-harvested crop.”¹²⁶ A certified seed program would increase Kentucky’s yields. As of 2016, seed varieties were imported from Canada, which is at a completely different latitude.¹²⁷ Certified seed is a type of seed that has “been bred to,

¹²² *New York Goes all in For Industrial Hemp*, HEMPTODAY (Jan. 10, 2018), <https://hemptoday.net/new-york-goes-for-hemp/> [http://perma.cc/4F65-NJPW].

¹²³ Press Release, Governor Cuomo Outlines FY 2019 Budget: Realizing the Promise of Progressive Government, N.Y. St. Gov. (Jan. 16, 2018), <https://www.governor.ny.gov/news/governor-cuomo-outlines-fy-2019-budget-realizing-promise-progressive-government> [http://perma.cc/QJ3Q-L4S2].

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Sourcing CBD: Marijuana, Industrial Hemp & the Vagaries of Federal Law*, PROJECT CBD (Mar. 28, 2016), <https://www.projectcbd.org/about/cannabis-facts/sourcing-cbd-marijuana-industrial-hemp-vagaries-federal-law> [http://perma.cc/B7DH-YK98].

¹²⁷ Abby Laub, *The Comeback Crop?*, KY. MONTHLY, <http://www.kentucky-monthly.com/lifestyle/featured/the-comeback-crop/> [http://perma.cc/JP2D-SGK9].

over many generations, have certain traits.”¹²⁸ Also, “[p]lants with all the same traits are called ‘varieties.’”¹²⁹ A variety is bred and maintained so that its characteristics are uniform, distinct, and stable across generations.”¹³⁰ Certified seed breeders seek to breed for traits like plant height, uniformity, and drought resistance.¹³¹

Colorado’s Department of Agriculture Approved Industrial Hemp Certified Seed program requires completion of a four-part course to be eligible for approval.¹³² The seed must be accepted by the Hemp Variety Review Board and pass the department’s state-wide variety validation trial to ensure the seed does not exceed 0.3 percent THC and fits the variety description.¹³³ The seed variety must then be produced by the Colorado Seed Growers Association according to permissible certified standards.¹³⁴ Lastly, all approved seed varieties are labeled with a cross-reference — the department’s approved seed-certifying agency’s tag — which indicates the specific production lots.¹³⁵ Although Colorado must remain within the confines of its regulations, its certified seed program has proven to be successful. In 2019, the Colorado Department of Agriculture announced six industrial hemp seed varieties passed the state’s validation and observation trial and are now eligible to be grown by members of the Colorado Seed Growers Association.¹³⁶ The announcement also stated growers planting the CDA Approved Certified Seed would be considered very low risk for testing purposes.¹³⁷

Research allowing Colorado to identify seeds that produce industrial hemp not only advances the state’s interests but also opens the door to more applicants interested in cultivating

¹²⁸ *Industrial Hemp Research Pilot Frequently Asked Questions*, WASH. ST. DEP’T AGRIC., <https://agr.wa.gov/inspection/hemp/hempfaq.aspx> [<http://perma.cc/KUE2-N8WK>].

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *CDA Approved Certified Seed*, COLO. DEP’T AGRIC., <https://www.colorado.gov/pacific/agplants/industrial-hemp> [<http://perma.cc/K4EV-87F4>].

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *CDA Announces Colorado’s 2018 CDA-Approved Certified Hemp Seed Varieties*, COLO. DEPT’ AGRIC., <https://www.colorado.gov/pacific/agmain/news/172019-cda-announces-colorado-s-2018-cda-approved-certified-hemp-seed-varieties> [<https://perma.cc/PNS3-BXME>].

¹³⁷ *Id.*

industrial hemp. Farmers who prefer to cultivate the seed and not the plant should be able to do so. If the Commonwealth adopts a certified seed program, Kentucky would become more self-sufficient by reducing import costs, increasing export profit, and providing Kentuckians with more options to participate.

By adopting a seed certification program, the KDA would make it easier for applicants to acquire seed without technical obstacles. The policy currently states that “participants are prohibited from acquiring industrial hemp seeds without prior approval from the KDA Hemp Program.”¹³⁸ In other words, participants must submit their acquisition requests to the KDA Hemp Staff and arrange delivery through the KDA offices if participants elect to get seeds from sources outside of Kentucky.¹³⁹ Further, “without exception, international hemp seed imports must occur through KDA’s federal [DEA] permit registration.”¹⁴⁰ Accompanying the permit, must be documentation detailing the seed’s THC content.¹⁴¹ Importantly, when seeds are purchased from outside of Kentucky, the KDA reserves the right to prohibit the acquisition of any seeds for any reason.¹⁴² However, if participants acquire seeds directly from a fellow participant in the program, the KDA does not require its agents to act as an intermediary to the transaction.¹⁴³ Thus, if Kentucky adopted a certified seed program, participants could acquire seeds directly from Kentucky seed breeders, which takes responsibility away from the KDA, which can then focus its efforts on advancing the program. This also allows farmers to develop relationships with other industry participants.

II. ENFORCEMENT CONCERNS ADDRESSED BY PILOT PROGRAM: TRANSPARENT SAFEGUARDS

Safeguards within the KDA’s hemp program enable law enforcement agencies to keep a close eye on applicants. Kentucky’s

¹³⁸ *Policy Guide*, *supra* note 53, at 8.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.*

IHRPP is not a smokescreen for marijuana protection.¹⁴⁴ In 2017, law enforcement seized sixty-one marijuana plants from an applicant who had been granted approval through the program to grow a maximum of twenty acres of hemp.¹⁴⁵ The cultivation of hemp itself serves as an enforcement mechanism against disguised marijuana because of the high risk of cross pollination.¹⁴⁶ Marijuana crops are ruined if grown next to hemp because their seeds would produce plants with insignificant amounts of THC.¹⁴⁷ Hemp fields have also been said to be a deterrent to marijuana growers.¹⁴⁸ This is because of the science underlying the seed industry's isolation of genotypes, which serves the purpose of preserving genetic integrity.¹⁴⁹ Thus, a hemp grower would not plant marijuana in his field if he intended to grow compliant hemp, because cross-pollination would essentially ruin the purpose of both plants.¹⁵⁰

Senate Bill 218, signed into law on March 20, 2017, addresses enforcement concerns and contains six safeguards.¹⁵¹ The current safeguards require the communication of GPS coordinates of approved, but uncultivated, industrial hemp sites to state and local law enforcement officers in order to facilitate a strong partnership with said authorities.¹⁵² Those coordinates must also designate “entrances, field boundaries, and specific points where GPS coordinates were taken.”¹⁵³ Another tactic implemented to foster a relationship with law enforcement is the requirement of a background check and consent to inspections of

¹⁴⁴ *Policy Guide*, *supra* note 53, at 2.

¹⁴⁵ *Id.*

¹⁴⁶ Glen Moberg, *GOP Lawmakers Make the Case for Industrial Hemp*, WIS. PUBLIC RADIO NEWS (Oct. 10, 2017, 9:30 AM), <https://www.wpr.org/gop-lawmakers-make-case-industrial-hemp> [<https://perma.cc/WL52-EP37>].

¹⁴⁷ *Id.*

¹⁴⁸ David P. West, *Hemp and Marijuana: Myths & Realities*, N. AM. INDUSTRIAL HEMP COUNCIL 14 (1998), http://www.votehemp.com/PDF/myths_facts.pdf [<https://perma.cc/4LEE-FNAM>].

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Kentucky Hemp Legislation*, KY. HEMPSTERS 3 (Dec. 28, 2017), <https://www.kyhempsters.com/legislation> [<https://perma.cc/R7UT-HCAD>] [hereinafter *Legislation*].

¹⁵² *Pilot Program Overview*, *supra* note 20.

¹⁵³ *Policy Guide*, *supra* note 53, at 3.

their premises where hemp is being grown, stored, handled, or processed.¹⁵⁴

The KDA's authority is broad. The KDA may temporarily suspend a license without giving the licensee advance notice of the charge against him or her, or an opportunity to be heard.¹⁵⁵ Further, the department may impose a monetary civil penalty, not to exceed \$2,500 per violation, "on any person who violates KRS 260.850 to 260.869, or an administrative regulation promulgated under the authority of KRS 260.850 to 260.869."¹⁵⁶ However, in order to permanently revoke a license, the KDA has to "notify the licensee of the charge against him or her and give the licensee an opportunity for a hearing before a three (3) person panel, whose members are designated by the Commissioner."¹⁵⁷ The enforcement mechanisms are adequate to address illegal or questionable behavior and provide sufficient time for the KDA to conduct an investigation.

The KDA has the authority to temporarily suspend a license up to sixty days if the licensee is alleged to have "[v]iolated any provision of KRS 260.850 to 260.869 or an administrative regulation promulgated under the authority of KRS 260.850 to 260.869."¹⁵⁸ The KDA may also suspend a license up to sixty days if a licensee makes false statements to the department or its representatives, or fails to comply with the instructions agreed upon in the contract signed at the time the industrial hemp license was issued.¹⁵⁹ Although these safeguards ensure an effective legal scheme for Kentucky, the KDA should weaken some of the unduly stringent requirements and penalties through regulations in order to promote the industry.

A. The THC Trap

The KDA estimated less than one percent of the hemp grown in Kentucky during the 2016 harvest would require

¹⁵⁴ *Id.*

¹⁵⁵ KY. REV. STAT. ANN. § 260.864(2) (LexisNexis 2017).

¹⁵⁶ *Id.* § 260.864(5).

¹⁵⁷ *Id.* § 260.864(3).

¹⁵⁸ *Id.* § 260.864(1)(a).

¹⁵⁹ *Id.* § 260.864(1)(b).

destruction for being over the THC limit for industrial hemp.¹⁶⁰ However, a greenhouse that contained of over 100 pounds of hemp—a value of \$18,000—in Pulaski County tested just above the hemp THC limit at 0.4 percent, and was subsequently destroyed by KDA agents.¹⁶¹ This destruction is wasteful and unfair considering THC levels can vary depending on growing conditions that include weather, crop diseases, and insect pressure.¹⁶² Regardless, it is the only way for the government to ensure noncompliant material does not enter the marketplace.¹⁶³ In order for Kentucky to lead the industry, the kinks and specifications must be dealt with through trial and error; however, trial and error does not have to be completely detrimental to the farmer if the THC percentage is within reasonable range.

Crop insurance for farmers whose crop tests above 0.3 percent but below 1 percent would protect the applicant while fostering good will for the program. Until the passage of the 2018 Farm Bill, access to crop insurance was not feasible. The 2018 Farm Bill makes industrial hemp eligible for federal crop insurance and other USDA programs, such as the ability to apply for federal research grants.¹⁶⁴ This places hemp on equal footing with other crops. Although it is not clear when crop insurance will be available to farmers under the 2018 Farm Bill,¹⁶⁵ the KDA could return application fees, waive the following year's fees, or offer a remedy within its authority to ensure the grower or processor does not abandon the program.

B. Waivers to Limit Liability

The KDA has authority to promulgate regulations to ensure compliance and guarantee enforcement, but the regulations should

¹⁶⁰ Tanner Hesterberg, *State Officials Burn Nearly \$20,000 in Hemp that Failed Standard*, WKYT (Apr. 12, 2017, 9:54 PM), <http://www.wkyt.com/content/news/State-officials-to-burn-nearly-20000-in-hemp-that-barely-failed-standard-419334524.html> [<https://perma.cc/7ZUD-UF5B>].

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *2018 Farm Bill*, *supra* note 87.

¹⁶⁵ Managers Bulletin: MGR-19-002, U.S. Dep't Agric., Risk Management Agency (Feb. 25 2019), <https://www.rma.usda.gov/en/Policy-and-Procedure/Bulletins-and-Memos/2019/MGR-19-002> [<https://perma.cc/TLY5-LWWQ>].

not restrict development. The KDA should adopt waivers that protect and encourage interested applicants. For example, the failure to submit a fully complete and truthful production report may result in denial to participate in the next year's program.¹⁶⁶ The production report must detail the number of acres or square feet planted, varieties planted, production methods, production inputs, yields, sales receipts, profits/losses, and any other information the KDA requests.¹⁶⁷ The KDA could alter this language to include only intentional or reckless conduct, and thereby, not bar applicants for negligent omissions or misstatements because many participants may not have the technical skills to complete a perfect report.

The KDA could incorporate waivers similar to those used in Colorado, which do not subject the applicant to any penalties if their hemp tests over 0.3 percent, but under 1 percent.¹⁶⁸ In Colorado, as long as the crop was grown under the program solely for research purposes by a person with a license to do so, and the crop "is destroyed or utilized on site in a manner approved of and verified by the Commissioner," no liability results.¹⁶⁹ The KDA has discretion¹⁷⁰ to determine how the crop is destroyed or utilized and could offer waivers to ensure the protection of participants. Pennsylvania also allows some leniency from the "THC trap" by permitting conformational testing or alternative destruction methods if the hemp tests between 0.3 and 1 percent, but the crop may not be moved from the site.¹⁷¹ To further research objectives, the KDA could restrict the crop from transportation or entering the market while permitting research to determine where and how the defect occurred.

The KDA should protect applicants through regulation or ask the legislature to amend Kentucky's industrial hemp laws to provide affirmative defenses for certain crimes or violations related to the program. Minnesota provides an affirmative defense for the possession of marijuana if the defendant possesses

¹⁶⁶ *Policy Guide*, *supra* note 53, at 10.

¹⁶⁷ *Id.*

¹⁶⁸ COLO. CODE. REGS. § 1203-23 (5.1) (LexisNexis 2017).

¹⁶⁹ *Id.* at § 1203-23 (5.1.2).

¹⁷⁰ *Policy Guide*, *supra* note 53, at iii.

¹⁷¹ 46 Pa. Bull. 7668(k) (Dec. 10, 2016).

industrial hemp grown under the program or he has a valid controlled substance registration from the DEA.¹⁷² Similarly, Virginia’s statutory scheme contains a protective measure for those in close proximity to licensed growers, stating that no person shall be prosecuted for the involuntary growth of industrial hemp incidental to the natural spread of seeds or pollen of the licensed grower.¹⁷³ If the KDA or legislature adopted rules like those in Minnesota and Virginia, participants’ anxiety that their actions may be subject to criminal charges will be greatly reduced.

C. Banking

Legislators and farmers worry that the Department of Justice could roll back protections for industrial hemp entities and cause financial institutions to close these accounts.¹⁷⁴ Kentucky Hemp Farmer John Taylor runs Commonwealth Extracts, a company that operates a scale extraction refinement process and manufacturing facility.¹⁷⁵ Through the normal course of his business, Taylor wrote a check to a farmer with the words “hemp payment” in the memo line, which was consequently refused by the bank and required the farmer to conduct his banking needs elsewhere.¹⁷⁶ The KDA should be as eager to foster effective communication between Kentucky financial institutions and farmers—as it is with law enforcement—to ensure business can move forward.

The Kentucky Department of Financial Institutions (DFI) issued a guiding memo, which outlined its policy and concerns.¹⁷⁷ The DFI does not perceive the participation in the industrial hemp program as a legitimate qualifier to categorize a client-participant as high risk under the Bank Secrecy Act (BSA) or the Anti-Money

¹⁷² MINN. STAT. ANN. § 18K.08(1)-(2) (2017).

¹⁷³ VA. CODE ANN. § 3.2-4113(C) (2017).

¹⁷⁴ Markgraf & Erwin, *supra* note 34.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ KY. DEP’T OF FINANCIAL INSTITUTIONS SUPERVISORY GUIDANCE 2016-1, INDUSTRIAL HEMP PRODUCTION IN KENTUCKY AND BANK SECRECY ACT AND ANTI-MONEY LAUNDERING PROCEDURES (May 1, 2016), <http://kfi.ky.gov/legal/Advisory%20Opinions/KDFI%20SG%202016-1%20Industrial%20Hemp%20Production%20BSA%20AML%20Procedures.pdf> [<http://perma.cc/NTC7-7GEE>].

Laundrying Procedures (AML).¹⁷⁸ The DFI does not support the notion a client's relationship with a banking institution should be threatened or terminated solely as a result of participation in the program.¹⁷⁹ Since the enactment of the 2018 Farm Bill, however, industrial hemp is classified as an agricultural commodity, meaning Kentucky financial institutions are free to collaborate with hemp farmers and the like. Further, participants are free to access the national banking system because hemp is no longer a controlled substance. Nevertheless, the transition takes time. U.S. Senate Majority Leader Mitch McConnell and Oregon Senator Ron Wyden asked the USDA to quickly issue regulations to end the uncertainty regarding financial institutions.¹⁸⁰ In the interim, the KDA should include guidance documents in its policies to better promote the expansion of the program. For example, the KDA could facilitate communication by providing participants with guidance on how to proceed under the 2018 Farm Bill in terms of access to financial institutions.

Additionally, the KDA's application process substantially limits investment because processors take the risk that their future applications will not be granted. These transactions do not differ from other transactions with financial institutions. The processor grants a security interest to the financial institution by offering collateral such as its facility, bank accounts, and equipment. Thus, if a processor's application is not accepted in a timely manner, it creates problems that impede on its ability to acquire financing in requisite time. Ultimately, if a processor is unable to obtain necessary capital investment, and its application is declined, the processor ends up in a sticky situation without the opportunity to produce profit. To facilitate growth, the KDA should provide guarantees that applicants will have access to banks and will receive answers regarding their applications within a reasonable amount of time.

¹⁷⁸ *Id.*

¹⁷⁹ *Id.*

¹⁸⁰ Press Release, Wyden, McConnell Urge USDA to Ensure Expeditious and Proper Implementation of the Hemp Farming Act, Ron Wyden U.S. Senator for Oregon (Feb. 15, 2019) <https://www.wyden.senate.gov/news/press-releases/wyden-mcconnell-urge-usda-to-ensure-expeditious-and-proper-implementation-of-the-hemp-farming-act> [<https://perma.cc/PFY9-EQ5Y>].

III. THE REQUISITE SEEDS TO ENSURE SUCCESS

One benefit of industrial hemp is its ability to be cultivated on a myriad of different soils.¹⁸¹ Regardless of the soil choice, hemp typically grows best when the soil is deep and well-aerated.¹⁸² Soils that drains poorly may not be conducive to hemp growth because they often collect water at the surface following heavy rain, which in turn damages the crop.¹⁸³ For these two reasons, hemp must be grown on soil that has good compaction and does not flood.¹⁸⁴ After the initial growth of the plant, hemp is relatively drought resistant.¹⁸⁵ Kentucky's soil is "deep, fertile, well supplied with humus, and its mechanical condition is such that it does not quickly dry out or become baked and hard."¹⁸⁶ The rolling hills of the Bluegrass State also aid in the production of hemp, as they provide excellent natural drainage.¹⁸⁷ Kentucky's long historical hemp cultivation, along with its unique soil classifications, indicate that the Bluegrass soil is a match made in heaven for hemp.¹⁸⁸

Kentucky has the seeds to ensure hemp's future. Not only are individual farmers risking their time and money to invest in the crop's potential, but processing facilities are also expanding to meet growing demand.¹⁸⁹ AgTech Scientific (AgTech) has invested more than five million dollars to build a 50,000-square-foot facility

¹⁸¹ *Growing Hemp*, CLIMATE CO. LAB (Jan. 2, 2018), <https://www.climatecolab.org/contests/2016/materials-matter/c/proposal/1330112> [http://perma.cc/X7C8-L6UG].

¹⁸² *Id.*

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ See RICHARD M. DAVIS, *HEMP FOR VICTORY: A GLOBAL WARMING SOLUTION* 198 (2009).

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ Eric C. Thompson et. al., *Economic Impact of Industrial Hemp in Kentucky*, UNIV. OF KY. CTR. FOR BUS. & ECONOMIC RESEARCH iii (July 1998), <https://www.rawstory.com/wp-content/uploads/2012/06/kentuckyhempstudy.pdf> [http://perma.cc/8HQS-S27F].

¹⁸⁹ See Farm Press Staff, *Kentucky Hemp Acres Swell and Louisville Facility Opens to Handle Demand*, SOUTHWEST FARM PRESS (July 14, 2017), <http://www.south-eastfarmpress.com/crops/kentucky-hemp-acres-swell-and-louisville-facility-opens-handle-demand> [http://perma.cc/65PT-FBRW].

in Bourbon County, Kentucky that is expected to open in 2018.¹⁹⁰ Mike French, founder and president of AgTech, said the company chose Kentucky based on agricultural and manufacturing advantages.¹⁹¹ French said “[t]he growing conditions are excellent and it’s ideally located geographically and near large-scale ‘pick-and-pack’ facilities like Amazon.”¹⁹² AgTech says its success is dependent on the success of industrial hemp farmers; therefore its plan to cover the full spectrum from seed to sale will increase the hemp yield and reduce risk.¹⁹³ Not only will AgTech contribute to the growth and promotion of Kentucky’s industrial hemp industry, but it will also facilitate the creation of 271 jobs in Bourbon County.¹⁹⁴

Sunstrand is a fiber processing plant that “converts industrial hemp and similar agricultural feedstocks into fibers and fillers that are compatible with plastics and other applications.”¹⁹⁵ Located in Louisville, Kentucky, Sunstrand recently expanded its 6,000-square foot facility to 25,000-square feet.¹⁹⁶ “Ramping up Kentucky’s industrial hemp processing capacity will increase [Kentucky’s] competitive advantages,” potentially positioning the Commonwealth as the national leader in the industry.¹⁹⁷ This expansion of processing would be good for Kentucky’s industrial status, and in turn, will have a positive impact on the Commonwealth’s job market. For example, more than 200 jobs will be available in Hickman County, Kentucky after the construction and opening of a one-and-a-half million-dollar processing plant.¹⁹⁸

¹⁹⁰ *AgTech Breaks Ground on \$5M Industrial Hemp Operation, Creating 271 Jobs*, LANE REP. (Oct. 18, 2018) <https://www.lanereport.com/106890/2018/10/agtech-breaks-ground-on-5m-industrial-hemp-operation-creating-271-jobs/> [https://perma.cc/4DXE-XK4K].

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.*

¹⁹⁵ Press Release, Ky. Dep’t Agric., Quarles Joins Celebration for New Sunstrand Processing Plant (May 23, 2017), <http://www.kyagr.com/Kentucky-AGNEWS/press-releases/Quarles-joins-celebration-for-new-Sunstrand-processing-plant.html> [http://perma.cc/L275-BXMP].

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ Amanda Roberts, *Industrial Hemp to Create About 200 Local Jobs*, WPSD LOCAL 6 (Feb. 20, 2017), <http://www.wpsdlocal6.com/2017/02/20/industrial-hemp-to-create-200-local-jobs/> [http://perma.cc/MN5J-5A34].

The Kentucky Hemp Exchange will build its processing plant at the Hickman industrial park in anticipation of a project with an Italian hemp seed supplier.¹⁹⁹

There are several processors actively succeeding in the hemp industry, including Victory Hemp Foods, which processes hemp into oils, seeds, and protein powders.²⁰⁰ In just three years, founder Chad Rosen's hemp-based product line has grown from a few stores to shelves in seventy-five markets across Kentucky.²⁰¹ Additionally, Rosen's business has "created close to 100 jobs in Louisville and Lexington, plus the ancillary benefits of contract labor for machinery repairs and parts."²⁰² The IHRPP clearly enables competition in the marketplace and demonstrates the sources to succeed.

The Kentucky Tobacco Research & Development Center uses hemp research to find new uses for tobacco and "encourage and facilitate the development of new crop opportunities for Kentucky agriculture."²⁰³ The program considers hemp a novel crop that could replace tobacco.²⁰⁴ Current studies authorized by the pilot program are evaluating the tobacco production model for growing industrial hemp for CBD extraction.²⁰⁵ "The objective of the study is to evaluate the potential to use the unique skill set" necessary to grow and manage a high-value, transplanted crop in order to produce high-value commodities from industrial hemp.²⁰⁶ Furthermore, the tobacco production model is a process whereby hemp plants are grown in a greenhouse and later transplanted into the field.²⁰⁷ Although the study is in its preliminary stages, the

¹⁹⁹ *Id.*

²⁰⁰ Rona Kobell, *Kentucky Says it's High Time for Hemp*, CITYLAB (Oct. 4, 2017), <https://www.citylab.com/environment/2017/10/kentucky-says-its-high-time-for-hemp/541920/> [<http://perma.cc/NC6B-BARU>].

²⁰¹ *Id.*

²⁰² *Id.*

²⁰³ Linda Perry, *Hemp: More Than Just Fiber*, UNIV. OF KY. ALUMNI ASS'N, Winter 2015, at 16 <http://www.uky.edu/Alumni/web/alumni/ukalumninet/ukalumni/KentuckyAlumni/Hemp.pdf> [<https://perma.cc/AZ6R-GFDE>].

²⁰⁴ *Id.*

²⁰⁵ Abstracts of Research Projects/Efforts, 2017 Univ. of Ky. Industrial Hemp Research Field Day (Dec. 19, 2017), https://hemp.ca.uky.edu/sites/hemp.ca.uky.edu/files/2017_industrial_hemp_field_day.pdf [<https://perma.cc/5C4H-D7ES>].

²⁰⁶ *Id.*

²⁰⁷ *Id.*

KDA is ensuring expansion with a thumb on research in order to become a leader in the industry.

According to an agriculture specialist at Southcentral Kentucky Community and Technical College, Mike Bullock, there is “great potential in hemp at a time when farmers have been slammed by depressed prices for corn and soybeans.”²⁰⁸ Due to hemp’s “myriad uses in fiber and food, Bullock sees [hemp] as potentially a better cash crop than corn or soybeans” and he estimated farmers could “realize a profit of [up to] \$400 per acre,” almost double the profit from soybeans.²⁰⁹ Soybeans have historically been Kentucky’s most profitable crop, generating approximately \$788.8 million dollars in 2015 alone.²¹⁰

Bullock concludes that farmers who use hemp as a double crop could reap hefty financial benefits, giving farmers another reliable option.²¹¹ Current studies indicate that when two different crops are grown on the same land in a single season, hemp can work well as a double crop.²¹² Research at Penn State University has demonstrated industrial hemp can be used as a double crop behind wheat.²¹³ Agronomist David Williams, director of the University of Kentucky’s Hemp Research Program, explained that hemp could potentially fit into a common double-cropping system similar to the technique commonly utilized with soybeans and wheat.²¹⁴ Kentuckians “plant wheat in the fall and harvest it in May or June and then plant soybeans directly in the same field behind the wheat harvest.”²¹⁵ Thus, hemp would not disrupt a farmer’s regular practices and would allow many farmers to easily adapt. However, due to current limitations in place on pesticide use, the KDA needs to implement new regulations if it wants to

²⁰⁸ Sergent, *supra* note 21.

²⁰⁹ *Id.*

²¹⁰ A QUICK GUIDE: AGRICULTURE FACTS, KY. AGRIC. 2017, USDA-NASS, https://www.nass.usda.gov/Statistics_by_State/Kentucky/Publications/Pamphlets/KY-ataGlance2016.pdf [<http://perma.cc/FQW7-Z28E>].

²¹¹ Sergent, *supra* note 21.

²¹² Luna Reyna, *Hemp’s ‘Double Crop’ Potential: Pennsylvania’s Research Program Is a Game Changer*, DOPE MAG. (Dec. 15, 2017), <https://www.dopemagazine.com/hemp-double-crop-potential/> [<https://perma.cc/3KCM-C7BP>].

²¹³ *Id.*

²¹⁴ Robin Roenker, *The How-tos of Hemp in Kentucky*, KY. LIVING (Dec. 29, 2015), <https://www.kentuckyliving.com/news/the-how-tos-of-hemp-in-kentucky> [<http://perma.cc/JYV4-F2L2>].

²¹⁵ *Id.*

incentivize double-cropping, due to the short time span between the harvest of one crop and the time to plant another crop in the same field, which could result in the transfer of pesticide residue.

Hemp may also have extraordinary tourism appeal in Kentucky. According to the National Travel and Tourism Office, “27.2 [percent] of overseas visitors went to small towns and countrysides in 2016.”²¹⁶ Kentucky has created many attractions that aid in hemp’s appeal and its agritourism market. For example, the Heritage Hemp Trail focuses on the deep historical roots hemp has sown into Kentucky soil.²¹⁷ The Trail “uncovers these roots and uses them to sow seeds for the future.”²¹⁸ The Trail explains to visitors how hemp contributed to Kentucky’s early economy and who made it happen.²¹⁹ These historic markets include the Henry Clay Estate in Lexington, Kentucky and the Farmington Historic Plantation that processed hemp in Louisville.²²⁰ Moreover, during Hemp History Week, vendors around Lexington make donuts using hemp power, hotdogs infused with hemp, and use hemp in brewing brown ale.²²¹ This exposes the public to hemp and the recreational benefits it can provide the Bluegrass.

Kentucky is capitalizing on hemp’s myriad appeal. In 2017, the University of Kentucky conducted its Industrial Hemp Research Field Day.²²² The event was open to the public and was held in conjunction with the Hemp Industries Association’s Hemp Conference (“Hemp Industries”) — the largest industrial hemp trade association in the United States.²²³ Hemp Industries brought

²¹⁶ Matt Markgraf, *From Hemp Maxes to Asian Carp, How Agritourism Can Grow Kentucky’s Economy*, WKMS (Sept. 30, 2017), <http://wkms.org/post/hemp-mazes-asian-carp-how-agritourism-can-grow-kentuckys-economy> [<http://perma.cc/3A8L-KCNH>].

²¹⁷ *Heritage Hemp Trail*, KY. HEMPSTERS (Jan. 6 2018), <https://www.kyhempsters.com/heritagehemptrail> [<http://perma.cc/W3LU-XB2H>].

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ *Id.*

²²¹ Monica Kast, *Kentucky-Grown Hemp Will Insulate the Walls of this House*, LEXINGTON HERALD-LEADER (updated June 9, 2017, 5:30 PM), <http://www.kentucky.com/news/local/counties/fayette-county/article155383269.html> [<http://perma.cc/AQ9G-AT8U>].

²²² Abstracts, *supra* note 205.

²²³ Katie Pratt, *UK Hemp Field Day Sept. 9*, UKNOW (Aug. 10, 2017), <https://uknow.uky.edu/research/uk-hemp-field-day-sept-9> [<http://perma.cc/8TXY-CAMM>]; *See also, Getting Down to Hemp Business in the Bluegrass State*, CASCADIA HEMP CO., <https://cascadiahempco.com/2017/11/industrial-hemp-arrives-in-wa/> [<http://perma.cc/QQ7K-BF8V>].

hundreds of people from as far away as China to the Kentucky hemp fields.²²⁴ At the event, “[v]arious researchers and specialists from the [University of Kentucky] College of Agriculture, Food and Environment [discussed] their research projects including work on hemp agronomy, microbiology, and diseases.”²²⁵ The Field Day consisted of twelve research projects and each visitor upon arrival received an abstract for each project and a map to each plot.²²⁶ With the map and easy accessibility to each plot, visitors could visit and obtain information about the projects.²²⁷ By providing a forum for the public to educate themselves and become familiar with industrial hemp, Kentucky is fostering future success for farmers and voters interested in industrial hemp.

IV. LEGISLATIVE REFORM AND RESEARCH

“Kentucky Congressmen have been fighting to bring industrial hemp back to American farmers since 2012.”²²⁸ The issue was first introduced by United States Sen. Rand Paul in 2011.²²⁹ The following year, Congressman and former KDA Commissioner James Comer announced “industrial hemp would be his top priority in the next legislative session.”²³⁰ Then, in 2017, Comer filed the Industrial Hemp Act, which would have reclassified hemp from a controlled substance to an agricultural crop.²³¹ Comer’s legislation would have increased the amount of legal THC industrial hemp can possess from 0.3 to 0.6 percent, which is significant for growers looking to produce hemp into an oil.²³² Although the Act was the first bill to address THC levels, it did not specifically address CBD.²³³ The legislation also aimed to protect

²²⁴ Chris Conrad, *HIA Brings Global Industry to Kentucky Hemp Fields*, LEAF ONLINE (Sept. 29, 2017), <http://theleafonline.com/c/business/hemp/2017/09/hia-visits-kentucky-hemp-fields/> [<http://perma.cc/YEE8-Q53K>].

²²⁵ Pratt, *supra* note 223.

²²⁶ *Id.*

²²⁷ *Id.*

²²⁸ *Legislation, supra* note 143.

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ Markgraf, *supra* note 28.

²³² *Id.*

²³³ *Id.* (emphasizing that the Act would help “solve 85 percent of the problems that the CBD oil producers have in Kentucky”); *see also* H.R. 3530, 115th Cong. (2017).

those farmers whose crops barely exceed the legal percentage without relinquishing control of the program. Although this legislation did not come to fruition, portions were adopted in the 2018 Farm Bill.

The Hemp Farming Act of 2018 was introduced to “remove the federal barriers in place that have stifled the industry.”²³⁴ The legislation was intended to allow Kentucky to harness the economic viability of hemp and demonstrate a realistic opportunity to commercialize hemp.²³⁵ The act built upon the successful pilot programs, such as Kentucky’s, by allowing states to be the primary regulators as long as the USDA approves their implementation plan.²³⁶ Further, the act permitted researchers to apply for federal grants from the USDA.²³⁷ The above provisions of the Hemp Farming Act of 2018 were included in the 2018 Farm Bill.

On March 20, 2017, Kentucky Senate Bill 218 (KY SB 218) was signed into legislation by Governor Bevin.²³⁸ KY SB 218 updates and expands the legal framework for Kentucky’s industrial hemp program.²³⁹ The bill also “aligns state regulations with the federal 2014 Farm Bill, and allows the KDA to modify the pilot program based on decisions made in Congress, rather than having to wait for the General Assembly to come back into session to change it by statute.”²⁴⁰ KY SB 218 clearly demonstrates Kentucky’s dedication to the promotion and expansion of industrial hemp by allotting the KDA more discretion to implement important and necessary regulations.

Not only does Kentucky have the seeds for success, but its pilot program is exceeding expectations. As of September 2018, Kentucky had planted 6,700 acres of hemp, doubling the prior year.²⁴¹ It is worth considering the type of growth that could result

²³⁴ Senator McConnell and Commissioner Quarles Announce Hemp Legislation, Press Releases (March 26, 2018), <https://www.mcconnell.senate.gov/public/index.cfm/2018/3/senator-mcconnell-and-commissioner-quarles-announce-hemp-legislation> [<https://perma.cc/8L96-CEQ4>].

²³⁵ *Id.*

²³⁶ *Id.*

²³⁷ *Id.*

²³⁸ *Legislation, supra* note 151.

²³⁹ *Id.*

²⁴⁰ *Id.* (“The legislation also replac[ed] the old Hemp Commission with a new Industrial Hemp Advisory Board that will give advice and input to KDA, and charges the University of Kentucky’s Regulatory Services laboratory with responsibility for THC testing.”).

²⁴¹ *Pilot Program Overview, supra* note 20.

if the KDA would ease restrictions and open the door to more willing applicants. Notably, with Sen. McConnell's combined with the benefits the Bluegrass affords industrial hemp cultivation, legalization and resulting commercialization is more likely every day. Finally, Kentucky's robust pilot program will offer a clear regulatory scheme that can serve as a guidepost for other states, while simultaneously pushing Kentucky to the forefront of industrial hemp in the United States.