

Hemp's Arbitrary 0.3% THC Legal Standard and the Consequences of Applying Such Standard

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INTRODUCTION

The legal distinction in the U.S. between lawful hemp and unlawful marijuana is the amount of Tetrahydrocannabinol ("THC").¹ THC is the cannabinoid responsible for intoxication in

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the plant species *Cannabis sativa* L. (the "plant" or "cannabis").² In order to be classified as lawful hemp, the plant must contain less than 0.3% THC on a dry weight basis.³ The rationale for imposing a THC limit as the distinguishing factor between legal hemp and illegal marijuana is to regulate the intoxicating variety of the plant stringently.⁴ Accordingly, one would conclude the 0.3% of THC is grounded in concrete scientific evidence.⁵ However, this standard is arbitrary and problematic in practice, creating significant challenges in effectively regulating hemp as an agricultural crop in the U.S.

Before analyzing this standard, it is important to review the context and history of hemp in the U.S. Unlike many other countries who have long regulated hemp as an agricultural crop independent of marijuana, for almost fifty years, the U.S. prohibited the cultivation of any variety of cannabis.⁶ The U.S. regulated all cannabis under strict drug control laws.⁷ However, through the 2014⁸ and 2018⁹ Farm Bills, the U.S. created a legal framework for the cultivation of hemp. Still, the arbitrary legal standard has created significant barriers for the hemp industry in practice.

I. HISTORY OF HEMP CULTIVATION IN THE U.S.

Hemp was cultivated in the U.S. at its inception and was commonly used to manufacture paper, fabrics, and other products.¹⁰ For many years, hemp was treated like any other agricultural commodity in that the U.S. Department of Agriculture ("USDA") compiled statistics, published reports for

¹ RENÉE JOHNSON, CONG. RSCH. SERV., R44742, DEFINING HEMP: A FACT SHEET (2019).

² *Id.*

³ *Id.*

⁴ *See id.*

⁵ *See generally id.*

⁶ *See* TYLER MARK ET AL., U.S. DEP'T OF AGRIC. ECON. RSCH. SERV., EIB-217, ECONOMIC VIABILITY OF INDUSTRIAL HEMP IN THE UNITED STATES: A REVIEW OF STATE PILOT PROGRAMS (2020).

⁷ *See id.*

⁸ Agricultural Act of 2014, Pub. L. No. 113-79, 128 Stat. 912 (2014) (codified at 7 U.S.C § 5940).

⁹ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, 128 Stat. 668 (2018).

¹⁰ JOHNSON, *supra* note 1.

the crop, and even assisted farmers with its production and distribution.¹¹ Between 1914 and 1933, thirty-three states enacted laws that limited the plant's legal production to medicinal and industrial purposes in an attempt to curb the use of cannabis flowers and leaves for their psychoactive effects.¹²

In 1937, Congress passed the Marihuana Tax Act ("MTA"), which required all growers, sellers, manufacturers, importers, and distributors of "marihuana" to register with the Treasury Department and imposed expensive taxes on these activities.¹³ The MTA's definition of "marijuana" expressly exempted "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 that is incapable of germination."¹⁴

Unfortunately, technological limitations prevented differentiating between hemp and marijuana variants according to THC levels, as we do today.¹⁵ The Federal Bureau of Narcotics ("FBN") promulgated stringent rules and regulations controlling hemp cultivation.¹⁶ For example, farmers had to strip all the leaves from each hemp plant before transport for processing.¹⁷ Further, the FBN's licensing methods served to make industrial hemp cultivation more arduous, if not untenable. As a result, American farmers stopped growing hemp, sweeping away America's hemp economy with it.¹⁸

After a portion of the MTA was deemed unconstitutional in 1969, Congress passed the Comprehensive Drug Abuse Prevention and Control Act of 1970, where Title II is the

¹¹ Renée Johnson, Cong. Rsch. Serv., RL32725, *Hemp as an Agricultural Commodity* (2018).

¹² *Id.*

¹³ Marihuana Tax Act of 1937, Pub. L. No. 75-238, 50 Stat. 551, *repealed by* Comprehensive Drug Abuse Prevention and Control Act of 1970, Pub. L. No. 91-513, 84 Stat. 1236, 1292 (1970).

¹⁴ *Id.*

¹⁵ See Christen D. Shepherd, *Lethal Concentration of Power: How the D.E.A. Acts Improperly to Prohibit the Growth of Industrial Hemp*, 68 UMKC L. REV. 239, 252 (1999).

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *See id.*

Controlled Substance Act of 1970 (the "CSA").¹⁹ The CSA classifies drugs into five schedules based on their psychological and physical harms, potential for abuse, and any redeeming therapeutic value.²⁰ Marijuana, along with LSD and heroin, is listed as a Schedule I drug, meaning it is classified as having a high potential for abuse, no currently accepted medical use in treatment in the United States, and a lack of accepted safety for use under medical supervision.²¹ The CSA substantively adopted the definition of "marihuana" from the MTA of 1937.²²

Like the MTA, per the CSA, only certain parts of the plant (generally the psychoactive portions) are controlled and defined as marijuana, while non-psychoactive components of the plant are exempted from control.²³ Despite the CSA, several states soon passed laws permitting the cultivation of hemp subject to certain parameters. In 1999, for example, North Dakota legalized the cultivation of hemp if farmers complied with licensure and registration requirements.²⁴ Montana passed a state law authorizing hemp production in 2001,²⁵ and several other states, including Hawaii, Kentucky, Maine, Maryland, and West Virginia, adopted state hemp cultivation and research programs in the early 2000s.²⁶ Due to the rise of these various state laws and the growing interest in hemp across the country, Congress passed the Agricultural Act of 2014, colloquially known as the 2014 Farm Bill.²⁷

II. 2014 FARM BILL

Section 7606 of the 2014 Farm Bill allows institutions of higher education or state departments of agriculture to cultivate hemp for research purposes, notwithstanding the CSA or any

¹⁹ 21 U.S.C. § 812 (2019).

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ *See* JOHNSON, *supra* note 1.

²⁴ H.B. 1428, 46th Leg. Assemb. (N.D. 1999).

²⁵ S.B. 261, 2001 Reg. Sess. (Mont. 2001).

²⁶ H.B. 57, 21st Leg., 2001 Haw. Sess. Laws (Haw. 2001); H.B. 100, 2001 Gen. Assemb., Reg. Sess. (Ky. 2001); L.D. 53, 2003 Me. Laws (Me. 2003); H.B. 1250, 2000 Leg. Sess. (Md. 2000); S.B. 447, 2002 W. Va. Acts. (W. Va. 2002).

²⁷ Agricultural Act of 2014, Pub. L. No. 113-79, 128 Stat. 912, 913 (codified at 7 U.S.C. § 5940).

other federal law, provided certain conditions are met.²⁸ The scope of the 2014 Farm Bill is limited to cultivation that is: 1) for research purposes (inclusive of market research); 2) part of an "agricultural pilot program" or other agricultural or academic research; and 3) permitted by state law.²⁹ The 2014 Farm Bill gave significant deference to states in regulating hemp cultivation and determining the scope of permissible activities in state programs.³⁰

The 2014 Farm Bill defines "industrial hemp" as the plant "Cannabis sativa L., and any part of such plant, whether growing or not, with a delta-9 THC concentration of not more than 0.3% on a dry weight basis."³¹ Notably, unlike the MTA and CSA, the 2014 Farm Bill definition of hemp distinguishes "industrial hemp" from "marijuana" based on THC concentration.³² Any plants exceeding the 0.3% THC limitation are considered marijuana and thus are regarded as a Schedule I controlled substance and illegal under the CSA.³³ The 2014 Farm Bill was set to expire on October 31, 2020 but has been extended through January 1, 2022.³⁴

III. 2018 FARM BILL

Further expanding the ability to cultivate hemp, on December 20, 2018, the Agriculture Improvement Act (the "2018 Farm Bill") was signed into law.³⁵ The 2018 Farm Bill amended the CSA to exclude hemp from the federal definition of "marijuana," and explicitly created an exemption from the CSA for THC found in hemp.³⁶ Specifically, the 2018 Farm Bill defines "hemp" as "the plant 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

²⁸ See generally Agricultural Act of 2014, Pub. L. No. 113-79, 128 Stat. 912 § 7606 (2014).

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ Consolidated Appropriations Act, 2021, H.R.113 117 Cong. (2020).

³⁵ Agriculture Improvement Act of 2018, Pub. L. No. 115-334, 128 Stat. 449 § 10113 (2018).

³⁶ Consolidated Appropriations Act, 2020, H.R.1158 116 Cong. (2019).

growing or not, with a delta-9 [THC] concentration of not more than 0.3 percent on a dry weight basis."³⁷ Accordingly, hemp is no longer regulated as a drug under the purview of the Drug Enforcement Administration ("DEA"), the federal agency charged with enforcing the CSA, but is now within the regulatory purview of the USDA, in coordination with state departments of agriculture and tribal authorities.³⁸ In August 2019, the DEA acknowledged hemp is no longer a controlled substance under the CSA and a DEA registration is no longer required to grow hemp.³⁹

The 2018 Farm Bill also established a federal regulatory framework for hemp production by allowing hemp production under the USDA's authority, in coordination with each state's local departments of agriculture.⁴⁰ Any state, U.S. territory, or Indian tribe desiring to obtain primary regulatory authority over hemp production must create a hemp production plan and receive approval from the USDA.⁴¹ All hemp production plans must comply with specific minimum standards established by the USDA.⁴² The 2018 Farm Bill allows for commercial activity and seeks to protect the interstate commerce of hemp.⁴³ Notably, jurisdictions are not required to authorize the production or sale of hemp or hemp products and are even afforded the express authority to adopt hemp regulations more stringent than federal regulations.⁴⁴ As a result, certain states continue to prohibit or limit certain hemp-related activities.⁴⁵

In October of 2019, the USDA set out an interim final rule (the "IFR") to establish the U.S. Domestic Hemp Production

³⁷ 7 U.S.C. § 1639o(1) (2019).

³⁸ The 2018 Farm Bill explicitly preserved the Federal Drug Administration's authority.

³⁹ See Press Release, DRUG ENF'T. ADMIN., DEA announces steps necessary to improve access to marijuana research (Aug. 26, 2019), <https://www.dea.gov/press-releases/2019/08/26/dea-announces-steps-necessary-improve-access-marijuana-research> [<https://perma.cc/U7WN-2QSC>].

⁴⁰ See Agricultural Improvement Act of 2018, Pub. L. No. 115-334, 132 Stat. 4490 § 10113 (2018).

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at § 10114.

⁴⁴ *Id.* at § 10113.

⁴⁵ Mona Zhang, *No CBD is not 'Legal in All 50 States,'* FORBES (Apr. 5, 2018, 7:00 AM), <https://www.forbes.com/sites/monazhang/2018/04/05/no-cbd-is-not-legal-in-all-50-states/?sh=10edc6a762c1> [<https://perma.cc/YQV7-CN6R>].

Program that set forth comprehensive regulations governing hemp cultivation and production.⁴⁶ The IFR includes minimum requirements for state hemp production plans and outlines a Federal plan for producers licensed directly by the USDA.⁴⁷ The IFR includes provisions for maintaining information on the land where hemp is produced, testing the levels of delta-9 THC, disposing of plants not meeting requirements, licensing requirements, and ensuring compliance with the IFR.⁴⁸ Due to public comments received in response to the IFR, the USDA made several changes, and then published, the Final Rule for Establishment of a Domestic Hemp Plan (the "Final Rule").⁴⁹ As explained in greater detail below, the Final Rule contains several problematic provisions related to THC.

IV. ESTABLISHMENT OF A 0.3% THC STANDARD IN THE U.S.

The laws governing hemp cultivation and distinction from marijuana have evolved since the nineteenth century. Given the clear legislative language in the 2014 and 2018 Farm Bills, one would conclude 0.3% THC is safe, and 0.4% THC is intoxicating based on scientific data thoughtfully applied by lawmakers. However, history shows that the 0.3% THC standard is an arbitrary figure. The 0.3% standard is rooted in a 1976 article by a Canadian researcher, Dr. Ernest Small, titled "A Practical and Natural Taxonomy for Cannabis," which stated, "it will be noted that we arbitrarily adopt a concentration of .3% Δ^9 THC (dry weight basis) in young, vigorous leaves of relatively mature plants as a guide to discriminating two classes of plants."⁵⁰ In a 2018 interview, Dr. Small explained that when he published the study, he "had no idea that [the 0.3% THC standard] would be used as a practical measure for countries licensing the amount of

⁴⁶ Establishment of a Domestic Hemp Production Program, 84 Fed. Reg. 58,522 (Oct. 31, 2019).

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ Establishment of a Domestic Hemp Production Plan, 86 Fed. Reg. 5,596 (Jan. 19, 2021).

⁵⁰ Ernest Small & Arthur Cronquist, *A Practical and Natural Taxonomy for Cannabis*, 25 TAXON 405, 408 (1976).

THC that would be permitted in order to grow [hemp]."⁵¹ Dr. Small also proclaimed that "it's now pretty well-known that a level of about one per cent THC is a more reasonable dividing line."⁵²

Scientific data also disputes this number and demonstrates the plant does not reach its intoxicating potential in plants under 1% THC.⁵³ Even the Congressional Research Service acknowledges that "1% THC is considered the threshold for cannabis to have a psychotropic effect or intoxicating potential".⁵⁴ According to the Potency Monitoring Project administered by the University of Mississippi in coordination with the National Institute on Drug Abuse, the average potency of marijuana samples collected as far back as the 1970s has never been below 2%.⁵⁵

V. INTERNATIONAL THC STANDARD

Globally, different THC standards distinguish legal hemp from marijuana.⁵⁶ For example, Canada and China also use the 0.3% standard, while the European Union currently has a 0.2% THC limit.⁵⁷ However, Australia, Ecuador, and Switzerland currently utilize a 1% THC standard.⁵⁸ As discussed below, the U.S.'s 0.3% THC limit creates practical issues and risks for hemp

⁵¹ Solomon Israel, *The Order of Cannabis*, WINNIPEG FREE PRESS (Jan. 4, 2018, 8:45 PM), <https://www.winnipegfreepress.com/arts-and-life/life/cannabis/the-order-of-cannabis-468097053.html> [<https://perma.cc/5XT6-LBAQ>].

⁵² *Id.*

⁵³ Franjo Grotenhermen & Michael Karus, *Industrial Hemp is Not Marijuana: Comments on the Drug Potential of Fiber Cannabis*, NOVA-INSTITUTE, <http://www.internationalhempassociation.org/jiha/jiha5210.html> [<https://perma.cc/5CX9-G8GX>] (last viewed July 23, 2021).

⁵⁴ JOHNSON, *supra* note 1.

⁵⁵ *Quarterly Report Potency Monitoring Project Report 104 December 16, 2008 thru March 15, 2009*, NAT'L INST. ON DRUG ABUSE, https://www.ncjrs.gov/pdffiles1/ondcp/mpmp_report_104.pdf [<https://perma.cc/GL5X-FCR3>] (last viewed July 23, 2021).

⁵⁶ See Marguerite Arnold, *Could CBD Standards Become Global*, CANNABIS INDUS. J. (July 22, 2020), https://cannabisindustryjournal.com/feature_article/could-cbd-standards-become-global/ [<https://perma.cc/DQ6E-G6V9>].

⁵⁷ Bill Griffin, *European Hemp Farmers Feeling Hampered by EU's Low THC Limit*, NEW FRONTIER DATA (Nov. 25, 2019), <https://newfrontierdata.com/cannabis-insights/hemp-cultivation-in-europe/> [<https://perma.cc/J4SA-EPY7>].

⁵⁸ Johnny Green, *Ecuador Sets Hemp Limit THC Limit at 1.0%*, INT'L CANNABIS BUSINESS CONF. (Sept. 22, 2019), <https://internationalcbc.com/ecuador-sets-hemp-the-limit-at-1-0/> [<https://perma.cc/4XXU-3765>].

farmers and places U.S. farmers at a competitive disadvantage in the global market.

Hemp exemption from drug control laws and the determination of an appropriate legal standard for such remain hotly debated issues among the United Nations ("UN") as states consider proposed amendments to international drug control treaties.⁵⁹ The 1961 and 1971 Conventions on Drug Control (the "Treaties") are international treaties that aim to limit drug activity to medical and scientific purposes through international cooperation.⁶⁰ The Treaties also classify cannabis as a Schedule I and IV controlled substance (in the same categories as heroin) without distinguishing hemp and hemp-derived preparations.⁶¹ However, the Treaties exempt from control certain cannabis that is grown for "industrial" or "horticultural" purposes, but do not define these terms.⁶² The International Narcotics Control Board has interpreted the exemption to be limited to cultivation for the purposes of producing fiber and seed, and not for producing CBD extract.⁶³ In contrast, the World Health Organization ("WHO") has interpreted the exemption to include the production of "pure CBD," but that term also remains undefined.⁶⁴ As a result, significant confusion and debate amongst member states

⁵⁹ See *International Drug Control Conventions*, U.N. OFFICE ON DRUGS & CRIME, https://www.unodc.org/unodc/en/commissions/CND/Mandate_Functions/Mandate-and-Functions_Scheduling.html [<https://perma.cc/6LDL-K5H8>] (last viewed July 23, 2021).

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

⁶³ *Questions and Answers Relating to WHO's Recommendations on Cannabis and Cannabis-Related Substances*, U.N. COMM. ON NARCOTIC DRUGS (Oct. 3, 2019), https://www.unodc.org/documents/commissions/CND/Scheduling_Resource_Material/Consultations_with_WHO_Questions_and_Answers_3_October_2019.pdf [<https://perma.cc/K7SB-54H7>] (INCB response to US Question, "The cultivation of cannabis for the extraction of CBD would need to be monitored under the provisions of the 1961 Convention because it does not meet the definition of article 28 (2) as the cultivation cannot be considered as being "for industrial purposes" as specified in the 1961 Convention.").

⁶⁴ *Id.* (WHO response to EU Question on Page 69: "If the CBD is derived from cannabis produced for purposes other than industrial or Horticultural ones, then it is controlled as a preparation of cannabis (Schedules I and IV) or an extract or tincture of cannabis (Schedule I) (INCB response to US Question on Page 48: "The cultivation of cannabis for the extraction of CBD would need to be monitored under the provisions of the 1961 Convention because it does not meet the definition of article 28 (2) as the cultivation cannot be considered as being "for industrial purposes" as specified in the 1961 Convention.").

contribute to international variances in hemp laws and differing opinions as to whether certain laws violate the Treaties.

In advance of a scheduled vote in December 2020, the WHO made several more recommendations to reform various provisions of the Treaties.⁶⁵ WHO Recommendation 5.5 would exempt CBD preparations containing not more than 0.2% THC from international control.⁶⁶ Fortunately, this recommendation was rejected.⁶⁷ Whether the proposed amendment is the most effective and appropriate means to affirmatively exempt hemp from international drug control and support the international hemp economy remains up for debate. A higher standard (such as 1%) could be an effective solution for international drug control and support an effective international hemp economy.

VI. PROBLEMS WITH FINAL RULE AND 0.3% THC STANDARD IN PRACTICE

Given the lack of a uniformity surrounding global hemp standards and the arbitrarily selected standard in the U.S., one expects some lenience around THC's natural fluctuation (which occurs due to many reasons such as weather and genetics) in the plant during cultivation. However, because of the THC limit and the strong positions of the DEA and other federal agencies, that leniency is legally limited. The Final Rule prescribes several problematic rules designed to control THC content including sampling, testing, and disposal requirements.⁶⁸

The Final Rule prescribes a 30-day window between sampling and harvest.⁶⁹ Farmers must notify their department of agriculture (or the USDA if governing in the jurisdiction) 30-days

⁶⁵ *Questions and Answers Relating to WHO's Recommendations on Cannabis and Cannabis-Related Substances*, U.N. COMM. ON NARCOTIC DRUGS (Nov. 26, 2019), https://www.unodc.org/documents/commissions/CND/Scheduling_Resource_Material/Cannabis/Consultations_with_WHO_Questions_and_Answers_26_November_2019.pdf. [<https://perma.cc/8YNL-E7AR>].

⁶⁶ *Id.*

⁶⁷ *CND votes on recommendations for cannabis and cannabis-related substances*, UNITED NATIONS OFFICE ON DRUGS AND CRIME (Dec. 2, 2020), <https://www.unodc.org/lpo-brazil/en/frontpage/2020/11/press-statement-december-2.html>.

⁶⁸ Establishment of a Domestic Hemp Production Program, 86 Fed. Reg. 5,596 (Jan. 19, 2021) (to be codified 7 C.F.R. 990).

⁶⁹ *Id.*

before their anticipated harvest.⁷⁰ Samples of the plants are collected and tested for THC content, and only hemp with a THC content below 0.3% may be harvested.⁷¹ This harvest must take place within 30-days of that original sample.⁷² Despite the Final Rule extending the harvest window from 15 days to 30 days, it remains problematic.⁷³ Because hemp's THC concentration increases as plants approach harvest, the 30-day window creates challenges for farmers, including the risk of total crop loss and penalties if the THC exceeds the legal limit.⁷⁴ In addition, the USDA requires that samples be taken from parts of the flowering material, where THC concentration is often highest.⁷⁵ Accordingly, this method likely includes the material with the highest THC concentration and does not represent the average THC concentration of the whole plant.

Due to the potential of a testing laboratory handling a controlled substance if the plant is found to have a THC concentration above 0.3%, laboratories testing hemp for THC concentration must be registered with the DEA. The Final Rule requires immediate registration, however the USDA issued an enforcement discretion policy delaying registration until January 1, 2023.⁷⁶ This means that not only must farmers have their crops sampled, tested, and harvested within a 30-day window, their samples must be analyzed by a DEA registered laboratory of which there are only seventy-two in the entire country.⁷⁷ With 21,496 hemp growers registered in the U.S. in 2020, many with

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *THC Levels in Cannabis and Harvest Dates*, ENCORE LABS (June 13, 2019), <https://www.encore-labs.com/thc-levels-in-cannabis-and-harvest-dates> [<https://perma.cc/G2Q6-W8GN>].

⁷⁵ *Sampling Guidelines for Hemp Hrowing Facilities*, U.S. DEP'T. OF AGRIC., <https://www.ams.usda.gov/sites/default/files/media/SamplingGuidelinesforHemp.pdf> [<https://perma.cc/4M6U-Y85Q>] (last viewed July 23, 2021).

⁷⁶ Establishment of a Domestic Hemp Production Program, 84 Fed. Reg. at 58,522.

⁷⁷ *Hemp Analytical Testing Laboratories*, U.S. DEP'T. OF AGRIC., https://www.ams.usda.gov/rules-regulations/hemp/dea-laboratories?field_lab_location_administrative_area=All&page=0 [<https://perma.cc/DK4T-KPDL>] (last viewed July 23, 2021).

multiple harvest lots that would require testing, seventy-two registered labs is not nearly enough to meet this need.⁷⁸

In addition, the Final Rule requires hemp to be tested for Total THC.⁷⁹ Total THC is the molar sum of delta-9 THC and delta-9 tetrahydrocannabinolic acid ("THCA").⁸⁰ Under this method, the amount of delta-9 THC must be added to 87.7% of the THCA.⁸¹ This testing standard differs from the 2018 Farm Bill which defines hemp in terms of its delta-9 THC concentration alone.⁸² The amount of total THC in hemp is often higher than the amount of delta-9 THC because total THC is delta-9 THC plus to 87.7% of the THCA.⁸³ This difference makes the Final Rule's already arbitrary 0.3% THC standard even harder to comply with. The Final Rule also includes a 1% THC negligence standard under which a farmer that grows plants that test above 0.3% THC but below 1% THC is negligent, but a farmer that grows plants greater than 1% THC faces higher penalties.⁸⁴ The Final Rule allows for alternative remediation techniques and no longer requires DEA or law enforcement officials to destroy non-compliant hemp.⁸⁵ However, farmers electing to use alternative options must still comply USDA mandated techniques.⁸⁶

CONCLUSION

The current restrictive federal program, largely due to the 0.3% THC threshold, is unrealistic and detrimental to farmers who are risking their livelihoods. This threshold presents adverse economic effects on an industry with tremendous potential. Given

⁷⁸ Laura Drotleff, *2020 Outlook: Licensed US Hemp Acreage Falls 9% from 2019, but Grower Numbers Increase 27%*, HEMP INDUS. DAILY (June 19, 2020) <https://hempindustrydaily.com/2020-outlook-licensed-u-s-hemp-acreage-falls-9-from-2019-but-grower-numbers-increase-27/> [<https://perma.cc/B9ZY-FM6M>].

⁷⁹ Establishment of a Domestic Hemp Production Program, 86 Fed. Reg. at 5,596.

⁸⁰ Rod Kight, *What is "Total THC" and Does it Matter?*, CANNABUSINESS (May 10, 2019), <https://cannabusiness.law/what-is-total-thc-and-does-it-matter/> [<https://perma.cc/C25Z-YW6W>].

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ Establishment of a Domestic Hemp Production Program, 84 Fed. Reg. at 58,522.

⁸⁵ *Id.*

⁸⁶ *Id.*

the arbitrary nature of the 0.3% THC standard and the real risks and consequences of exceeding this threshold, the solution is clear – raise the THC standard in the U.S. and globally from 0.3% to 1%, a standard based in science.