



Cultivating Hemp - What could go wrong; What could go right?

By: Robert Angus Williams

The prospect of hemp cultivation continues to generate significant interest across the Sunshine State. As interest waxes, the State and Federal legal framework is undergoing a major transition. Recent changes in Federal and State law, along with anticipated changes in administrative rules might just allow hemp cultivation to mature into a commercial crop. The State rules are literally being written while the Federal regulatory framework struggles to catch up. At the outset, it is essential to understand that hemp and marijuana are different, but both belong to the *Cannabis sativa* plant species. The *Cannabis sativa* plant species in Florida legal parlance is divided into two broad categories: marijuanaⁱ and hempⁱⁱ distinguished by the percentage of Tetrahydrocannabinol (THC) produced by the plant. Specifically, the total delta-9 THC concentration on a dry-weight basis is the distinguishing factor between marijuana and hemp. This article focuses on hemp and the developing regulatory framework that will allow legal hemp cultivation. By definition hemp “has a total delta-9 [THC] concentration that does not exceed 0.3 percent on a dry-weight basis.”ⁱⁱⁱ Generally, hemp plants exceeding the legal THC concentration are “hot” plants and provide government regulators and law enforcement the consternation associated with much of hemp regulation. The global market for hemp has more than 25,000^{iv} uses. The return of the “legal” cultivation of *Cannabis sativa* signals a renewed demand for hemp with the goal of providing a new revenue source for Florida’s farmers that have been severely impacted by disease and natural disasters. This article will provide a brief history of hemp as an agricultural commodity and an overview of the new regulatory structure. Regardless of the government regulations, the success of hemp as a viable crop in Florida depends on discovering/developing varieties of the *Cannabis sativa* plant suitable for cultivation along with the development of a market for hemp products.

Origins and History of Cultivation

Hemp likely originated in central Asia in the region generally between Siberia and the Himalayas.^v The Chinese date hemp cultivation for textile fiber back to 2,800 B.C.^{vi} Hemp was first grown for fiber and then later for food and oil derived from the plant’s seeds.^{vii} However, cultivation of *Cannabis sativa* for narcotic purposes seems to have occurred many centuries later in central Asia or Persia.^{viii} Hemp was introduced to Europe around 1,500 B.C., probably by the Scythians and the crop was widely cultivated and used across Europe by the 16th century A.D.^{ix} The Spanish brought hemp to Chile around 1545 and the plant was introduced to North America shortly after the Puritans settled in New England in the latter half of the 17th century. However, the demands of the household fiber industry in the Colonies were apparently dominated by flax.^x Hemp cultivation was apparently thought to be a beneficial crop and the Virginia Legislature promoted the industry as cultivation spread west. In 1775 Kentucky produced its first crop of hemp.^{xi} While hemp cultivation diminished in the Eastern states, export for Kentucky hemp flourished via the New Orleans market.^{xii} Demand for fiber increased and U.S.

Navy demand for cordage and sailcloth reached a peak between 1840 and 1860. Thereafter, hemp cultivation steadily declined and by 1913 most cultivation was limited to Kentucky.^{xiii}

In an apparent attempt to halt the use and spread of psychoactive *Cannabis* varieties the Marijuana Tax Act was enacted in 1937.^{xiv} The Marijuana Tax Act required the U.S. Treasury Department to assert control over all *Cannabis* cultivation. All hemp growers were required to register and be licensed by the Federal government.^{xv} During World War II, (1943-1944) an emergency program was introduced to encourage the cultivation of hemp as a substitute to the unavailable foreign imports of abaca and jute to satisfy rope and cordage needs.^{xvi} After World War II hemp cultivation steadily declined and became negligible as a commercial crop.^{xvii} Policymakers continued the effort to eliminate the use of psychoactive *Cannabis sativa* leading to greater restrictions.

While the strength and durability of hemp fibers have been used for cordage and coarse textiles for centuries, the plant also provides raw materials for pulp and paper manufacture, composite wood products, and industrial products, e.g. geotextiles and nonwoven industrial fabrics. The plant also historically provided foodstuffs, seed/grain and oil.^{xviii} However, due to the labor intensive production techniques, other natural and synthetic materials displaced hemp demand.^{xix}

In 1970, the U.S. government enacted the Comprehensive Drug Abuse Prevention and Control Act of 1970 thereby criminalizing the possession of “Marihuana”, which included all varieties of *Cannabis sativa*,^{xx} making the possession of both hemp and marijuana illegal in the United States. *Cannabis* cultivation was also prohibited in many other countries during this same time. However, much of Asia, South America, Eastern Europe, and a few countries in Western Europe did not enact similar prohibitions.^{xxi} Hemp as a significant commercial crop diminished worldwide. In 1998, hemp made up “less than one percent of total world production of vegetable fibers.”^{xxii} However, that same year Canada began licensing the cultivation of hemp, using the general legal standard of less than 0.3 percent THC content.^{xxiii}

The Canadian regulatory framework requires hemp farmers undergo police background checks and farmers must report and register the areas under current and the previous two years of cultivation.^{xxiv} The crop also undergoes laboratory testing to determine THC levels.^{xxv} The Canadian regulatory scheme is similar to that used by some nations in Western Europe.^{xxvi}

In January 2000 the USDA described the hemp market as “thin” with weak demand and susceptible to oversupply.^{xxvii} The USDA cited findings from *The Impact of Industrial Hemp in Kentucky* regarding the potential of hemp fiber to replace molded automobile parts or fiberglass replacement.^{xxviii} However, a relatively recent product of hemp production is cannabidiol (CBD.) It is very likely that the initial economic viability of commercial hemp production will rely primarily on the CBD market until other uses become economically viable on a commercial scale.

Federal Law

Twenty years after Canada commenced regulating the legal cultivation of hemp, the U.S. relaxed the Federal prohibitions on hemp cultivation. The Agriculture Improvement Act of 2018 (2018 Farm Bill), enacted by Congress and signed by President Trump, became effective on December 20, 2018, and

amended the Agricultural Marketing Act of 1946 by creating Subtitle G – Hemp Production 7 USCA §§1639o – 1639s.^{xxxix} The legislation also included amendments to the Controlled Substances Act providing a legal pathway for hemp cultivation.^{xxx} The 2018 Farm Bill excludes hemp from the definition of “marihuana”^{xxxi} in what amounts to a major shift in U.S. policy regarding low THC *Cannabis sativa*.

The change in federal policy created a mechanism whereby States and Indian tribes may assert primary regulatory authority over hemp production within their relevant jurisdiction.^{xxxii} While the shift in policy allows a pathway forward for hemp production, significant hurdles remain. It should be no surprise that the general requirements described below resemble the Canadian regulatory scheme. Assertion of hemp regulatory authority requires Indian Tribes or States to devise and submit a plan for hemp cultivation and production.^{xxxiii} The State/Tribal Hemp Plan must then be submitted to the Secretary of the United States Department of Agriculture (USDA).^{xxxiv} State or Tribal plans are required to include maintenance of information for three years regarding lands upon which hemp is grown.^{xxxv} The legal description of the land must also be included and maintained.^{xxxvi} Specific procedures for laboratory testing of a crop’s THC concentration must be developed along with a protocol for effective disposal of “hot”^{xxxvii} plants and products.^{xxxviii} The Federal law also requires specific enforcement provisions, minimum/random annual inspections of cultivation sites, a certification that the State or Tribe has adequate resources to implement the program, and reporting requirements from the State or Tribe to the USDA.^{xxxix} Notably, the Federal law specifically does not preempt or limit States or Tribes from enacting more stringent hemp laws and regulations.^{xl}

Florida’s Quick Response

It is very likely that considerable pent up demand for hemp cultivation existed in Florida prior to the passage of the 2018 Farm Bill. Notably, during the 2018 election, Florida Commissioner of Agriculture, Nikki Fried effectively campaigned on this specific issue. Commissioner Fried touted hemp cultivation as a beneficial crop to the environment and farmer.^{xli} Whether Commissioner Fried is an oracle of Congressional action or simply recognized the growing hemp demand, Congress passed the 2018 Farm bill within two months of the election and the Florida Legislature extended this policy shift to our State during the 2019 session. The Florida Legislature nearly unanimously passed SB 1020 and Governor DeSantis approved that action on June 25, 2019.^{xlii} Hence, Section 581.217, Florida Statutes, and the State Hemp Program (Hemp Program) within the Florida Department of Agriculture and Consumer Services (FDACS) was created. Unsurprisingly, the new law closely tracks the Federal requirements for the creation of the Hemp Program. Tracking the Federal law hemp is specifically defined as *Cannabis sativa* with a total THC concentration that does not exceed 0.3 percent on a dry weight basis.^{xliii} The definition includes all derivative extracts, isomers, salts, acids, and salts of isomers and generally adopts the Federal definition and apparently the generally accepted international standard.^{xliv} At that same time, Florida also amended section 893.02(3), Florida Statutes to excluded hemp^{xlv} and industrial hemp^{xlvi} from the definition of “Cannabis.” This change essentially excludes hemp and industrial hemp from the Florida Drug Abuse Prevention and Control Act.^{xlvii} Notably, Florida law now finds that cannabidiol (CBD) is neither a controlled substance nor an adulterant.^{xlviii} This legislative finding removes significant State law impediments to the marketing and sale of CBD oil, although, Federal limitations remain and will be discussed later.^{xlix}

FDACS is required to initiate rulemaking to administer the state hemp plan^l, this process is ongoing and will be discussed further in the next section. FDACS is thereafter required to seek USDA approval of the State Hemp Plan within 30 days after FDACS rule adoption.^{li} The USDA must then act decisively and approve or disapprove the State Hemp Plan for conformance with the requirements of the 2018 Farm Bill within 60 days after receipt.^{lii} The USDA is currently writing procedures for this review and approval process. If the State Hemp Plan is disapproved by the USDA the Governor and Cabinet, sitting as the Administration Commission, must then develop recommendations to amend the state plan and submit those recommendations to the legislature.^{liii} While the involvement of the Administration Commission seems odd at first glance it is driven by the Farm Bill requirement that FDACS consult with the Governor and chief law enforcement officer of the state prior to submitting an amended plan to the USDA.^{liv} The Governor and Cabinet sitting as the Administration Commission includes the Governor, Attorney General (the State's chief law enforcement officer), the Chief Financial Officer, and the Commissioner of Agriculture.^{lv} Seemingly, the Administration Commission is bound to submit a recommendation to the legislature, even if the recommendation does not require a legislative change, but only an amendment to the required FDACS rules.^{lvi}

Lawful hemp cultivation requires a license from FDACS.^{lvii} A licensee will be required to submit a full set of fingerprints to allow FDACS to satisfy the Federal requirement^{lviii} prohibiting a person convicted of a controlled substance felony for 10 years following the conviction from cultivating hemp.^{lix} The FDACS' rules must also require the Global Positioning System coordinates and legal description of the hemp cultivation areas.^{lx} FDACS must maintain a land registry of these locations which will be submitted monthly to the USDA.^{lxi} FDACS was granted the authority to enter premises and conduct random inspections to enforce the requirements of the State Hemp Plan.^{lxii} The new Florida law also places very strict control over the source of hemp seeds and cultivars, requiring only certified low THC varieties be used for cultivation. Only certified hemp seeds and cultivars from a "certifying agency" or from a university conducting industrial hemp pilot (research) projects may be used by licensed cultivators.^{lxiii} Finally, State and Federal law also require close scrutiny of the distribution and sale of hemp extract, including CBD's intended for ingestion. The forthcoming rule for hemp extract products will need to require testing for THC content, precise tracking, expiration dates, the amount of extract in a product (in milligrams,) and a statement that the product has low THC content.^{lxiv}

Once a licensee successfully obtains permission to begin cultivation, State and Federal laws seem to extend protections for licensees. The Federal law clearly shields a negligent violation of a hemp program from criminal enforcement by Federal, State, Tribal, or local governments.^{lxv} Generally, negligent violations of the licensed activity will only result in reasonable corrective action plans and not criminal enforcement.^{lxvi} Violations involving a culpable mental state greater than negligence require FDACS to report to the US Attorney General and the Florida Attorney General.^{lxvii}

An Industrial Hemp Advisory Council, (Council) adjunct to FDACS, was created to provide advice and expertise to FDACS regarding the State Hemp Program.^{lxviii} The 15 member advisory council will be appointed by the Governor, President of the Senate, Speaker of the House, and the Commissioner of Agriculture along with representatives from law enforcement, the agricultural industry, and academia.^{lxix} While the advisory council is required to meet at least once annually, no date was required for the

appointments.^{lxx} The Council was established to provide advice and expertise to FDACS on the plans, policies, and procedures for the administration of the State Hemp Plan. The Council is expected to meet for the first time in September 2019. However, on July 25, 2019, Commissioner Fried announced^{lxxi} the appointment of the FDACS Hemp Advisory Committee (Committee)^{lxxii} to “provide advice and recommendations on a broad range of industry issues dealing with the growing, processing, manufacturing, testing, education, and retail sales of Hemp” and will provide advice and expertise to FDACS on matters such as banking and finance; retail operations; consumer safety; and hemp research that are beyond the scope of the State Hemp Plan.^{lxxiii} While, the Council and Committee will presumably focus on different aspects of the State Hemp Program, both evince a strong commitment to public input.

FDACS Rulemaking

FDACS enthusiastically commenced the rulemaking process even before SB 1020 became effective and held rulemaking workshops on June 20, 21, and 24, 2019.^{lxxiv} The Legislature required FDACS to initiate rulemaking by August 1, 2019, to adopt rules to administer the state hemp plan (Section 581.217, Florida Statutes) which must also include testing procedures for determining the delta-9 THC concentrations in cultivated hemp and a disposal procedure for hemp plants cultivated in violation of the statute or FDACS rules.^{lxxv} Additionally, the Legislature also required FDACS to consult with the Florida Department of Health and the Florida Department of Business Regulation regarding its proposed rules.^{lxxvi} In advance of the June 2019 workshops, FDACS published the Draft State Hemp Program Rule (Draft Rule).^{lxxvii} The Draft Rule effectuates the State and Federal law authorizing FDACS to regulate the cultivation of hemp as an agricultural commodity.^{lxxviii} Notably, FDACS also specifically recognizes that hemp “is a potentially invasive plant species and is a threat to the plant life of this state if not properly controlled.”^{lxxix} The Institute of Food and Agricultural Sciences, IFAS, at the University of Florida determined that hemp is a “High Invasion Risk”.^{lxxx} The Draft Rule requires an annual license issued by FDACS to cultivate hemp and requires that hemp plants or parts be introduced into or moved within the state in compliance with the rule.^{lxxxi} The Draft Rule outlines the license application criteria outlined in the Federal and State law, i.e. location of cultivated area and criminal background check, each license application must include an environmental containment plan.^{lxxxii} The containment plan must include a description of the strategies to prevent the spread of hemp during cultivation, harvesting, and transport.^{lxxxiii} The application must also include a waste disposal plan and identify the methods to destroy “hot” plants (THC greater than 0.3% dry weight).^{lxxxiv} An “Agricultural Bond” is required for each growing location over five contiguous acres to cover destruction costs if the licensee fails to do so.^{lxxxv}

Lawful cultivation will require a licensee to comply with the containment and disposal plans previously mentioned.^{lxxxvi} In addition records must be maintained describing the varieties of hemp cultivated for at least the previous three years.^{lxxxvii} The grower may only use certified hemp seed^{lxxxviii} or nursery stock from an FDACS’ registered nursery.^{lxxxix} The certification, label, and receipt for hemp seeds must also be kept for at least three years.^{xc} Every entry point to a hemp cultivation site must be posted with the license number and a statement that hemp is being grown at that location.^{xci}

The primary regulatory concern can be separated into two general areas: the danger posed by a potentially invasive species and the cultivation of plants with a delta-9THC above the legal definition for hemp. The Draft Rule specifically references statutory requirements regarding invasive plants as does FDACS Rule 5B-57.013, Florida Administrative Code, for the industrial hemp pilot projects.^{xcii} The bonding requirement of the Draft Rule is clearly aimed at preventing or controlling the spread of hemp from an abandoned location. Tight controls are also planned when hemp is harvested. Prior to harvest the licensee must notify FDACS and confirm that the hemp has a THC concentration within the legal definition of hemp.^{xciii} Should the required lab tests confirm the presence of “hot” plants, the licensee must assure the destruction of the plants, although limited harvesting of the seeds and stalks may occur under certain conditions.^{xciv} Specific intrastate transportation requirements also apply to the harvested crop and enclosed vehicles/containers must be used when transporting any real distance.^{xcv} Additionally, significant information about the crop must also be in the hauler’s possession such as bill of lading, inspection certificate, and the ownership information of origination and destination of the crop.^{xcvi} Interstate movement of hemp plants or hemp products capable of hosting pests or disease must comply with rigorous regulatory criteria designed to prevent the spread of pests or disease that may affect hemp cultivation in Florida.^{xcvii}

While the Hemp Program is governed primarily by the Draft Rule, several other rules require modification in order to fully effectuate the requirements of SB 1020. These rules will cover requirements for hemp seeds, hemp extract for ingestion in animal feed, and the permitting and regulation of hemp extract processing and human food manufacturing.

FDA Issues

The United States Food and Drug Administration (FDA) continues to spend energy regarding questions surrounding cannabidiol (CBD).^{xcviii} Dr. Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Associate Commissioner for Policy explained that the FDA is applying a “rigorous, science-based” approach to the evaluation of cannabis related products including CBD.^{xcix} The FDA’s task is to protect consumers regarding the quality and safety of products used for therapeutic and medical purposes.^c The FDA recognizes that the 2018 Farm Bill and many States have eliminated prohibitions on cannabis related products.^{ci} However, the FDA quickly points out that other laws remain effective to regulate these products including CBD.^{cii} The FDA indicated that if products are marketed as having therapeutic effects or treats disease then that product is regulated as a drug and requires FDA approval.^{ciii} Food supplements, including dietary, are also regulated and it is currently illegal to place into interstate commerce products containing CBD.^{civ} The FDA recognizes the potential benefits of CBD but indicates that questions remain regarding the substance’s safety.^{cv} At a public hearing the FDA heard from a myriad of stakeholders requesting a pathway to allow lawful marketing of products containing CBD.^{cvi} The questions perplexing the issue include the amount of CBD that can safely be consumed and does this vary based on the form.^{cvi} The FDA is also concerned about drug interactions, special populations: children, pregnant women, and the elderly, as well as risks from long term exposure.^{cviii} The Acting Commissioner of Food and Drugs for the FDA, Dr. Norman E. “Ned” Sharpless remarked at the May 21, 2019 public hearing that although hemp is no longer a Federally controlled substance, the FDA retains regulatory authority to regulate cannabis containing products

such as CBD.^{cxix} Dr. Sharpless indicated that the FDA has approved EPIDIOLEX, MARINOL, and SYNDROL drug products for various medical treatments.^{cx} EPIDIOLEX contains CBD while MARINOL and SYNDROL contain a synthetic form of THC.^{cxii} Interestingly, the FDA apparently has no objection to a several hemp seed products, currently proposed to be marketed in human food, as “generally accepted as safe” so long as those products comply with all other FDA requirements.^{cxiii} However, because both CBD and THC have been evaluated as drugs it is currently illegal for these substance to be added to food or used as a dietary supplement.^{cxiiii} In an effort to inform the general and regulated public, the FDA published “Questions and Answers” regarding the regulation of cannabis and cannabis-derived products.^{cxiv} The only FDA-approved drug containing CBD is Epidolex and the agency expresses concern over the proliferation of products containing CBD and marketed for therapeutic or medical uses.^{cxv}

In Florida, Section 581.217(3)(e), Florida Statutes, defines “hemp extract” as a substance or compound intended for ingestion that is derived from or contains hemp and that does not contain other controlled substances, which clearly lands these products within the definition of “food” in Section 500.03, Florida Statutes. Therefore, FDACS proposed rules would require entities intending to manufacture or sell hemp extracts intended for ingestion to meet all requirements of food establishments as provided in Chapter 500, Florida Statutes, and the rules adopted pursuant to it. In addition, Section 581.217(7), Florida Statutes, requires that all hemp extract distributed and sold in the state to have a certificate of analysis prepared by an independent laboratory. The analysis must be accessible via a barcode or QR code on the packaging and state that the hemp extract batch was tested and found to have less than the legal delta-9 THC limit and found to be free of contaminants unsafe for human consumption. The packaging must also provide the hemp extract batch number, an internet address for information about the batch, an expiration date, the number of milligrams of hemp extract, and a statement that the total delta-9 THC does not exceed 0.3 percent on a dry-weight basis. All of these requirements are intended to ensure consumer protection and transparency.

UF and FAMU Pilot Projects

In 2017, the Florida Legislature recognized the increased interest in hemp cultivation as well as the lack of real-world knowledge regarding cultivation in Florida required action. In response, the Legislature created a legal mechanism allowing educational institutions to establish pilot projects to research the “cultivation, harvesting, processing, market research, and sales of approved industrial hemp agricultural, industrial, and commercial products.”^{cxvi} The University of Florida (UF) quickly followed by Florida Agricultural and Mechanical University (FAMU) are currently operating pilot projects permitted by the Florida Department of Agriculture and Consumer Services.^{cxvii} The 2019 hemp bill expanded the eligibility for research projects to any Florida College System institution or state university that has an established agriculture, engineering, or pharmacy program.^{cxviii}

The UF project focuses on identifying hemp varieties suitable for cultivation across Florida while developing “hemp management practices and cropping systems” that are economically viable.^{cxix} FAMU’s project has similar goals, but also includes processing for beneficial oils and fibers.^{cxx} The UF and FAMU pilot projects also focus on developing methods to control the plant, recognizing the threats of a potentially invasive species.^{cxxi} In short, these universities will figure out what can grow, how to foster that growth, how to contain the crop in the proper location, and whether the crop can be profitable.

CONCLUSION?

The economic success of hemp will require the development of markets for the crop. While CBD oil is likely to provide healthy demand, markets for other plant components, i.e. seeds and fibers, seem less than certain. None the less, the crop continues to stir great excitement as a potential new revenue stream for Florida’s farmers. The Florida Department of Agriculture and Consumer Services working diligently to adopt its rules to implement the State Hemp Plan in a manner to meet the requirements of the 2018 Farm Bill, while balancing the need to provide consumer protection with the goal of business flexibility for Florida’s emerging hemp industry of cultivators and processors.

ⁱ Art. 10, § 29, Florida Constitution

ⁱⁱ Hemp can be divided into two sub-categories “hemp” § 581.217, Florida Statutes and “industrial hemp” §1004.4473, Florida Statutes. Referenced by §893.02(3), Florida Statutes. The only discernable difference is that “industrial hemp” was sanctioned as part of a pilot project to allow Universities to conduct research for commercial hemp production.

ⁱⁱⁱSection 581.217(3)(d), Florida Statutes, Chapter 2019-132, Section 2, Laws of Florida

^{iv} Congressional Research Service: Hemp as an Agricultural Commodity (June 22, 2018)

<https://fas.org/sgp/crs/misc/RL32725.pdf>

^v *Hemp*, Yearbook of the Department of Agriculture, Dewey, L.H. (1913)

^{vi} Dewey

^{vii} Dewey

^{viii} Dewey

^{ix} Dewey

^x Dewey

^{xi} Dewey

^{xii} Dewey

^{xiii} Dewey

^{xiv} *Feasibility of Industrial Hemp Production in the United States Pacific Northwest*, Station Bulletin 681, Agricultural Experiment Station, Oregon State University, Daryl T. Ehrensing, author (May 1998))

^{xv} Ehrensing

^{xvi} Ehrensing

^{xvii} Ehrensing

^{xviii} Ehrensing

^{xix} Ehrensing

^{xx} Public Law 91-513, Oct. 27, 1970.

^{xxi} Ehrensing

^{xxii} Ehrensing

^{xxiii} Health Canada, March 1998, Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000

^{xxiv} Health Canada, March 1998, Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000

^{xxv} Health Canada, March 1998, Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000

^{xxvi} Ehrensing

^{xxvii} Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000

^{xxviii} Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000

^{xxix} Agriculture Improvement Act of 2018, PL 115-334, §10113, December 20, 2018.

xxx 21 U.S.C.A. §§802, 812
xxxi 7 USCA 1639o(1)
xxxii 7 U.S.C.A. 1639p (a)(1)
xxxiii 7 U.S.C.A. 1639p (a)(1)
xxxiv 7 U.S.C.A. 1639p (a)(1)
xxxv 7 U.S.C.A. 1639p (a)(2)(A)(i)
xxxvi 7 U.S.C.A. 1639p (a)(2)(A)(i)
xxxvii Total delta-9 [THC] concentration exceeding 0.3 percent on a dry-weight basis.
xxxviii 7 U.S.C.A. 1639p (a)(2)(A)(ii), (iii)
xxxix 7 U.S.C.A. 1639p (a)(2)(A)(iv), (v), (vi), (vii)
xl 7 U.S.C.A. 1639p (a)(3)
xli <https://nikkifried.com/priorities/> last visited on 7/30/2019
xlii Chapter 2019-132 Laws of Florida.
xliii §581.217 (3)(d)
xliv Health Canada, March 1998, Industrial Hemp in the United States: Status and Market Potential, USDA, January 2000
xlv as defined in section 581.217, Florida Statutes
xlvi as defined in section 1004.4473, Florida Statutes (Industrial Hemp Pilot Projects)
xlvii Chapter 893, Florida Statutes
xlviii §581.217(2)(b), Florida Statutes.
xlix *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
l § 581.217(12), Florida Statutes
li §581.217(4), Florida Statutes.
lii 7 U.S.C.A. 1639p (3)(b)
liii §581.217(4), Florida Statutes
liv 7 U.S.C.A. 1639p (3)(b)(2)
lv Art. IV, Section 4, Florida Constitution, Section 14.202, Florida Statutes
lvi § 581.217(5)(c), Florida Statutes
lvii § 581.217(5), Florida Statutes
lviii § 7 USCA 1639p (e)(3)(B)(i)
lix § 581.217 (5)(b) and (5)(e)2. Florida Statutes
lx § 581.217 (5)(d), Florida Statutes, 7 U.S.C.A. 1639p (a)(2)(A)(i)
lxi § 581.217 (8), (9), Florida Statutes
lxii § 581.217 (11), Florida Statutes
lxiii § 581.217 (6), Florida Statutes
lxiv § 581.217 (7), Florida Statutes
lxv 7 U.S.C.A. 1639p (e)(2)(C).
lxvi §§ 581.217 (10), (13)(c), Florida Statutes, 7 U.S.C.A. 1639p (e)(2)(B)
lxvii § 581.217 (10)(d), Florida Statutes, 7 U.S.C.A. 1639p (e)(3)(A)
lxviii § 581.217 (14), Florida Statutes
lxix § 581.217 (14)(b), Florida Statutes
lxx § 581.217 (14)(e), Florida Statutes
lxxi Commissioner Nikki Fried Announces Members of New Hemp Advisory Committee, <https://www.freshfromflorida.com/News-Events/Press-Releases/2019-Press-Releases/Commissioner-Nikki-Fried-Announces-Members-of-New-Hemp-Advisory-Committee> (last visited August 7, 2019)
lxxii §570.232, Florida Statutes
lxxiii FDACS Hemp Advisory Committee, <https://www.freshfromflorida.com/content/download/84321/2484161/FDACHempAdvisoryCommitteeProcedures.pdf> (last visited August 7, 2019)
lxxiv Notice of Development of Proposed Rules, FAR 45/110, June 6, 2019, Sections 581.217(5)(c) and (12), Florida Statutes

-
- lxxv § 581.217(5)(c), Florida Statutes.
- lxxvi § 581.217 (12), Florida Statutes.
- lxxvii Draft Rule 5B-57.014
- lxxviii Draft Rule 5B-57.014(1)
- lxxix Draft Rule 5B-57.014(1)
- lxxx <https://assessment.ifas.ufl.edu/assessments/cannabis-sativa/> last visited 7/8/19
- lxxxi Draft Rule 5B-57.014(3), (4)
- lxxxii Draft Rule 5B-57.014 (4)(d)
- lxxxiii Draft Rule 5B-57.014 (4)
- lxxxiv Draft Rule 5B-57.014 (4)(e)
- lxxxv Draft Rule 5B-57.014 (4)(f)
- lxxxvi Draft Rule 5B-57.014 (5)(a), (b)
- lxxxvii Draft Rule 5B-57.014 (5)(c)
- lxxxviii see Rule 5E-4.016(2), F.A.C.
- lxxxix Draft Rule 5B-57.014 (5)(e)
- xc Draft Rule 5B-57.014 (5)(d)
- xcI Draft Rule 5B-57.014 (5)(h)
- xcii § 581.083, Florida Statutes
- xciii Draft Rule 5B-57.014 (8)
- xciv Draft Rule 5B-57.014 (9)
- xcv Draft Rule 5B-57.014 (11)(a)(1.)
- xcvi Draft Rule 5B-57.014 (11)(a)(1.)
- xcvii Draft Rule 5B-57.014 (11)(b)
- xcviii *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019., *FDA Regulation of Cannabis and Cannabis-Derived Products: Questions and Answers*, <https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-questions-and-answers>, last visited 7/1/2019
- xcix *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- c *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- ci *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- cii *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019.
- ciii *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- civ *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- cv *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- cvi *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019

-
- ^{cvii} *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- ^{cvi} *FDA is Committed to Sound, Science-based Policy on CBD*, Amy Abernathy, M.D., Ph.D., Principal Deputy Commissioner, and Lowell Schiller, J.D., Principal Association Commissioner for Policy, United States Food and Drug Administration, June 19, 2019
- ^{cix} Remarks by Dr. Sharpless at the FDA Public Hearing on Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, <https://www.fda.gov/news-events/speeches-fda-officials/remarks-dr-sharpless-fda-public-hearing-scientific-data-and-information-about-products-containing>, May 31, 2019, last visited July 2, 2019
- ^{cx} Remarks by Dr. Sharpless at the FDA Public Hearing on Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, <https://www.fda.gov/news-events/speeches-fda-officials/remarks-dr-sharpless-fda-public-hearing-scientific-data-and-information-about-products-containing>, May 31, 2019, last visited July 2, 2019
- ^{cx} Remarks by Dr. Sharpless at the FDA Public Hearing on Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, <https://www.fda.gov/news-events/speeches-fda-officials/remarks-dr-sharpless-fda-public-hearing-scientific-data-and-information-about-products-containing>, May 31, 2019, last visited July 2, 2019
- ^{cxii} Remarks by Dr. Sharpless at the FDA Public Hearing on Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, <https://www.fda.gov/news-events/speeches-fda-officials/remarks-dr-sharpless-fda-public-hearing-scientific-data-and-information-about-products-containing>, May 31, 2019, last visited July 2, 2019
- ^{cxiii} Remarks by Dr. Sharpless at the FDA Public Hearing on Scientific Data and Information about Products Containing Cannabis or Cannabis-Derived Compounds, <https://www.fda.gov/news-events/speeches-fda-officials/remarks-dr-sharpless-fda-public-hearing-scientific-data-and-information-about-products-containing>, May 31, 2019, last visited July 2, 2019
- ^{cxiv} *FDA Regulation of Cannabis and Cannabis-Derived Products: Questions and Answers*, <https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-questions-and-answers>, last visited July 2, 2019
- ^{cxv} *FDA Regulation of Cannabis and Cannabis-Derived Products: Questions and Answers*, <https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-questions-and-answers>, last visited July 2, 2019
- ^{cxvi} §1004.4473 (1)(d), Florida Statutes
- ^{cxvii} Rule 5B-57.013, Florida Administrative Code
- ^{cxviii} Section 1004.4473(2)(a), Florida Statutes
- ^{cxix} UF/IFAS Industrial Hemp Pilot Project Research Plan (Version 2), <https://programs.ifas.ufl.edu/media/programsifasufledu/hemp/UFIndustrialHempPilotProjectSummary.pdf> (last visited August 7, 2019)
- ^{cx} Florida A&M University, Industrial Hemp Research Pilot Program, <http://www.famu.edu/BOT/Industrial%20Hemp-FINAL.pdf> (last visited August 7, 2019)
- ^{cx} UF/IFAS Industrial Hemp Pilot Project Research Plan (Version 2), <https://programs.ifas.ufl.edu/media/programsifasufledu/hemp/UFIndustrialHempPilotProjectSummary.pdf> (last visited August 7, 2019), Florida A&M University, Industrial Hemp Research Pilot Program, <http://www.famu.edu/BOT/Industrial%20Hemp-FINAL.pdf> (last visited August 7, 2019)