

U.S. House Committee on Agriculture  
Subcommittee on Biotechnology, Horticulture, and Research

“An Examination of the USDA Hemp Production Program”

July 28, 2022

Submitted by:

Dr. Ryan F. Quarles

Commissioner, Kentucky Department of Agriculture

Good morning and thank you Chairwoman Plaskett and Ranking Member Baird for the opportunity to speak today. My name is Ryan Quarles and I serve as Kentucky’s Commissioner of Agriculture. I was elected to this office in 2015 and re-elected in 2019. As Commissioner, it is my honor to lead the 218 employees of the Kentucky Department of Agriculture in serving the Commonwealth’s 76,000 farm families and the tens of thousands of Kentuckians who work in agriculture and agriculture-related industries.

From 2020 to 2021, I served as president of the National Association of State Departments of Agriculture (NASDA). NASDA is a nonpartisan, nonprofit association that represents the elected and appointed commissioners, secretaries, and directors of the departments of agriculture in all fifty states and four U.S. territories. NASDA grows and enhances American agriculture through policy, partnerships, and public engagement. My experience as a leader in NASDA gave me an opportunity to collaborate with, and learn from, my counterparts in other states in ways that I believe were beneficial to the people of Kentucky.

Since Congress first authorized the states to conduct agricultural pilot programs in the 2014 Farm Bill, Kentucky has been a leader. And indeed, hemp is a crop that connects Kentucky’s past to its future. My great-grandfather grew hemp on the banks of the Kentucky River in support of the Second World War effort while my grandfather was serving as a Marine in the Pacific theater. When I took office in 2016, I directed my staff to undertake a top-to-bottom review of Kentucky’s hemp program, which was then in its infancy, and to recommend reforms that would enable Kentucky to become the epicenter for hemp production in America. I wanted to take full advantage of the 2014 Farm Bill’s authorization for state departments of agriculture to conduct hemp research pilot programs by designing a hemp program that would encourage farmers to grow hemp, and encourage entrepreneurs to build businesses to process hemp into marketable products, right here in the Commonwealth. In short, my strategic objective was to use the 2014 Farm Bill’s “research pilot program” to position Kentucky’s farmers and processors to compete and win the race to build a robust hemp industry.

I’m proud to say that we accomplished that goal. By the time USDA began its work to develop the administrative regulations that would be necessary to implement the statutory changes

in the 2018 Farm Bill, Kentucky’s legislative and regulatory framework was widely recognized as one of the best in the Nation. We were gratified to see Kentucky’s hemp licensing program, and data collected by our partners at the University of Kentucky, cited frequently throughout the final rule that USDA promulgated in January 2021. And the fact that USDA’s final rule in many ways conformed to the structure of Kentucky’s existing hemp program suggests that USDA’s policy approach was built with Kentucky’s hemp licensing program in mind. That was gratifying to us, not least because the federal regulatory framework did not require us to implement drastic changes that would have been disruptive to the community of farmers and entrepreneurs who were already working here.

This summer Kentucky’s hemp program is in its ninth year. Like other states, we observed a rapid expansion of acreages from 2015 through 2019, followed by an equally rapid decline beginning with the 2020 growing season. One reason for this decline was that production in the previous years, particularly the 2019 growing season, far outpaced demand. Many farmers ended that year with a hemp harvest for which there was no buyer, even those who started the year with a signed contract. There remains a surplus of harvested hemp from that year. Here is a table depicting Kentucky’s experience, in numerical terms, from 2014 to present:

Kentucky Department of Agriculture Hemp Program												
Annual Overview												
Production Year	University Projects	Processor / Handlers	Growers	KY Counties with Hemp	Approved Acres	Planted Acres	Harvested Acres	% Grain of Seeds	% Fiber	% CBD / Cannabinoids	% Grain & CBD	% Seed & Fiber
2014	7	9	20	14	-	33	-	47%	32%	21%		
2015	8	29	99	41	1,742	922	500	47%	6%	47%		
2016	17	45	137	60	4,600	2,300	2,000	34%	6%	60%		
2017	17	49	204	71	12,800	3,200	2,300	36%	5%	27%	32%	
2018	14	72	210	73	16,100	6,700	6,000	18%	4%	61.5%	14%	2.5%
2019	12	200	978	102	60,000	26,500	24,900	2%	4%	92%	0	2%
2020	12	178	970	113	32,000	5,000	4,500	4%	4%	92%	0	0
2021	17	140	450	99	11,500	1,800	1,700	2%	7%	91%	0	0
June 2022	13	93	240	90	5,530	TBD	TBD	TBD	TBD	TBD	TBD	TBD

In addition to the overproduction I mentioned, the hemp industry has been severely hampered by the slowness of the federal Food and Drug Administration to create a regulatory pathway for hemp-derived cannabinoids, particularly cannabidiol (CBD). Without clear direction from FDA regarding products containing hemp-derived CBD, large retailers will not carry the products and many business leaders are reluctant to move forward with the development and manufacture of CBD-related products. That reluctance, in turn, has dampened industry demand for harvested hemp material.

By contrast, we have been pleased with USDA’s prompt and thoughtful approach to hemp policy. As I mentioned previously, we were pleased that USDA took such close interest in

Kentucky's existing hemp program while the federal administrative regulation was being developed. Since then, we have enjoyed a respectful and mutually supportive relationship with the hemp staff at USDA.

We have observed some challenges that warrant continued attention. Under the final rule, USDA's Farm Service Agency (FSA) is tasked with the responsibility for assigning the unique lot numbers for each contiguous planting of a single variety of hemp. We believe that FSA's local staff members need more training to learn how to properly record hemp plantings, especially when the need arises to assign unique sub-field numbers to account for the different varieties of hemp being planted within a single field. Additional training is also needed for accurate reporting of indoor hemp production. Currently, we see that when a producer plants multiple varieties in a single field or indoor facility, the lot number is often assigned incorrectly. Moreover, once a lot number has been assigned by FSA, those numbers are not reliably transferring electronically to the USDA-AMS Hemp Program's software, Hemp eManagement Platform (HeMP). Without the appropriate lot numbers in the USDA HeMP system, states and laboratories are unable to properly identify lots or report THC testing results back to USDA. In time, we are confident that this problem will be resolved.

Looking ahead, we have some suggestions for improvements to hemp policy at the federal level that would improve matters in Kentucky and other states. For one, we believe that laboratories need not be DEA-registered, but they should be required to attain ISO 17025 accreditation, with total THC on a dry weight basis as part of their scope, prior to offering THC testing services for compliance purposes.

Should Congress consider revising the federal definition of hemp plants, we urge it to raise the THC threshold from 0.3% to 1.0%. At the same time, it would be appropriate for the new 1.0% limit to include not only delta-9 THC, but every other THC isomer which could have an intoxicating effect on consumers, including without limitation synthetically created delta-8, delta-10, delta-7, HHC, and others. Embracing a "total THC" standard instead of a "delta-9 THC only" standard will establish a threshold which better reflects the material's true intoxicating potential.

In addition, Congress should consider adopting a separate definition for consumer-ready hemp products. The current law's definition is focused on the chemical compounds within the hemp plant at the time of its harvest in the field or greenhouse; it is not a useful yardstick for measuring the intoxicating potential of consumer products that are intended for human consumption such as gummies, liquids, vapes, or "smokeables." For consumer products, we believe a separate legal standard is needed. And that product standard needs to focus on quantities, not percent concentration by weight.

To illustrate, a candy bar weighs about 1.76 ounces, which converts to 50,000 milligrams (mg). If that same candy bar's THC concentration was 0.3%, it would contain 150 mg of THC. By comparison, a typical "adult-use" THC candy bar made with marijuana contains only 100 mg of THC and is recommended to be consumed in 4 or 5 time-separated doses. Some literature recommends that chronic pain patients should start with a 2.5 mg dose of THC and consume no

more than 40 mg of THC each day—considerably less than the 150-mg candy bar that could be made from hemp-derived THC and yet remain below a 0.3% THC concentration limit.

For this reason, if Congress’s goal is to eliminate or at least mitigate the intoxicating effects of consumable products made from hemp, we believe that it makes little sense to regulate a consumer product’s THC content in percentage or concentration terms. The better approach would be to limit THC content in terms of quantity, like milligrams, with a numerical cap in milligrams that is sufficiently modest as to eliminate or at least mitigate its intoxicating effects.

In Kentucky and other states, there is considerable confusion about whether existing federal law’s definition of hemp serves to legalize synthetic compounds that were made in a laboratory. I am referring to delta-8 THC products as well as many other newer products, many of which contain synthetic THC levels and byproducts in levels that are harmful to consumers’ health, but also other synthetic compounds such as such as delta-10 THC, THC-O, HHC, and others which we expect to proliferate in the coming months and years unless Congress draws a clear line separating natural hemp products (containing only those chemical compounds which were extracted from the hemp plant) from synthetic products (which contain intoxicating chemicals created in a laboratory). A good starting point would be a revised definition which retains the word “extracts” but eliminates the word “derivatives”—because that word has been at the center of litigation in Kentucky and other jurisdictions.

There has been some discussion about whether it would be advisable to exclude fiber and grain hemp crops from the regulatory and testing requirements of the federal hemp production framework. It is true that most certified grain and fiber seed varieties have proven to be THC-compliant and stable, but there is no guarantee that every future fiber and grain crop will be produced from compliant varieties. Indeed, there are some fiber and grain varieties which are not compliant. Here in Kentucky we have tested and subsequently prohibited some of those varieties from our program due to excessive THC content. For that reason we believe all hemp, regardless of its intended application, must be subject to THC testing.

Looking to the future, we expect that in the coming years we will see modest increases in the number of acres planted, at least until FDA provides the regulatory pathways for products containing CBD and other non-intoxicating cannabinoids. I remain proud of the hemp licensing program we have built here in Kentucky and believe that we have laid the groundwork for the Commonwealth to emerge as a lasting center of hemp production in the United States. I want to thank the members of Kentucky’s congressional delegation for their sustained interest in this crop and the steps they have taken to foster Kentucky’s hemp industries. Senator McConnell in particular has been a tremendous partner during my tenure as Kentucky’s Agriculture Commissioner, and I want to thank him and his staff for their partnership in advancing federal hemp policy in a way that is beneficial to Kentucky and the Nation.

Thank you for the opportunity to appear today. I will do my best to answer any questions you may have for me.

## **Commissioner of Agriculture Ryan Quarles Official Biography**

*Updated October 2021*

Dr. Ryan F. Quarles serves as Kentucky's Commissioner of Agriculture. First elected to that position in 2015, he was re-elected in 2019, winning 117 of 120 counties.

Under his leadership, the Kentucky Department of Agriculture (KDA) started several new programs, including initiatives to combat hunger and connect Kentucky farmers to new markets.

Quarles's outspoken advocacy for farmers has been recognized on the regional and national level. He has served as President of the National Association of State Departments of Agriculture (NASDA), as President of the Southern Association of State Departments of Agriculture (SASDA), and as Chairman of the Republican Agriculture Commissioners Committee (RACC).

Quarles graduated from the University of Kentucky in 2006 with three undergraduate majors and two graduate degrees. In 2008, he graduated with a Master's degree in higher education from Harvard University. He received his law degree from the University of Kentucky and a doctorate in higher education from Vanderbilt University in 2018.

From 2010 to 2014, Quarles served as member of the House of Representatives. A native of Scott County, he grew up on his family's farm in central Kentucky, an area where they have lived and farmed for more than 200 years.

