Testimony for The Committee on Agriculture, Nutrition, and Forestry of the United States Senate, titled "Hemp Production and the 2018 Farm Bill." July 25, 2019

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Thank you, Chairman Roberts, Ranking Member Stabenow and to all committee members for affording NHA this opportunity to speak on the implementation of the new hemp provisions enacted by the Agricultural Improvement Act of 2018. We are appreciative of this committee and its wonderful staff, and to Secretary Sonny Perdue, Under Secretary Greg Ibach, General Counsel Stephen Vaden, Deputy Administrator, Sonia Jimenez and other USDA officials that have long been supportive of the hemp industry.

The National Hemp Association is a D.C. based non-profit, grassroots organization supporting tens of thousands of farmers, businesses and consumers. We have a particular interest in ensuring that this opportunity benefits small and medium-sized farmers who form the backbone of America's rural and agricultural economies and the foundation upon which this country's hemp industry is being built. The passage of the 2018 Farm Bill has brought a lot of hope to a lot of people as we now have the chance to bring to life all of the potential this crop has to offer: for farmers; for economic development in rural communities; for increased sustainability of products we all consume on a daily basis; and for American leadership in global industries and markets that are rapidly evolving to deliver the many valuable benefits of hemp to people all around the world.

Among the many issues surrounding the implementation of the hemp provisions of the 2018 Farm Bill, the National Hemp Association would like to focus today on the following issues of prime importance to our industry: testing protocols; sampling; personnel eligibility requirements; cross-pollination; hemp flower; and importation of biomass.

TESTING PROTOCOLS

Proper and reasonable testing protocols will be instrumental in ensuring the hemp industry's success, particularly with respect to the testing protocol used to determine whether hemp crops meet the legal standard enacted by the Farm Bill:

''SEC. 297A. DEFINITIONS. ''In this subtitle: ''(1) HEMP.—The term 'hemp' means the plant Cannabis sativa L. and any part of that plant, including the seeds thereof and all derivatives…with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis."

Hemp is defined in this way because delta-9 tetrahydrocannabinol ("D9-THC") is the only one of at least 113 different biochemical compounds produced in the Cannabis sativa plant species ("cannabis") that can have an intoxicating effect on humans. Cannabis that is relatively high in D9-THC concentrations remains a controlled substance under Federal law, while cannabis that is relatively low in D9-THC—specifically under 0.3% on a dry weight basis—is what the law now defines as "hemp," and is no longer considered a controlled substance under Federal law as a result of the 2018 Farm Bill.

The Farm Bill further enacted a requirement for Federal, state and tribal hemp programs to include "a procedure for testing, using post-decarboxylation or other similarly reliable methods, delta-9 tetrahydrocannabinol concentration levels."

One of the challenges that the 2014 Farm Bill-authorized pilot programs revealed in this respect, and what we hope to prevent in the forthcoming USDA regulations, is that if states implement too many different testing protocols, then the industry is left in a situation where what is legal in one state may not be legal in another. This can create undue hardship for farmers selling across state lines, for trucking companies, for law enforcement, and for consumers.

Another of the challenges revealed by the 2014-era pilot programs relates to the uncertainty of determining D9-THC in hemp crops, including 'using post-decarboxylation or other similarly reliable methods.'

After consultations with scientists, state Departments of Agriculture and industry stakeholders, we'd like to recommend an approach that creates a level playing field across the country while adhering to the law and providing the best possible protection for farmers and consumers. This can be accomplished by specifying procedures to be used nationwide for testing D9-THC concentrations.

Specifically, the National Hemp Association recommends that these procedures call for using Gas Chromatography-Flame Ionization Detection (GC-FID) or High-Performance Liquid Chromatography (HPLC) to estimate D9-THC concentrations in post-decarboxylated hemp, and that the estimates resulting from those post-decarboxylation methods be divided by 3 in order to determine the D9-THC concentrations on a dry-weight basis, thus determining whether the crop meets the legal definition of hemp.

GC-FID and HPLC are the most commonly used testing methods by states.

GC-FID is the most common method for testing "using post-decarboxylation" and calls for equipment and skills already possessed by most state Departments of Agriculture, thus keeping costs down for the states, and, therefore, in the form of licensing fees levied by the state (to recoup the costs of administering the hemp program), for farmers.

By contrast, HPLC testing requires skills and equipment that some states possess while others do not, but farmers and processors often prefer HPLC testing for their regular course of business because it provides a wider range of useful analyses to assess the quality of their crops. Therefore, though administrative costs can be higher, farmers in states that utilize this method benefit from efficiencies in satisfying compliance requirements alongside their own quality control needs at the same time.

The reason for dividing the D9-THC concentrations in post-decarboxylated hemp by 3 is due to the relative difference in the concentration of D9-THC in post-decarboxylated hemp as compared to the concentrations in hemp on a dry-weight basis. Peer-reviewed research (Small and Cronquist, 1976; Dussy et al., 2005; UN Office on Drugs and Crime, 2009; Taschwer and Schmid, 2015, Iffland et al., 2016; and others) demonstrates that the ratio of D9-THC concentrations in post-decarboxylated hemp (0% moisture) to the concentrations of D9-THC concentrations in hemp on a dry-weight basis (8-13% moisture) is somewhere between 3:1 and 11:1. Our recommendation to divide the post-decarboxylated D9-THC concentrations by 3 reflects the most conservative end of that range (3:1), so as to obtain the greatest assurance that a crop will not exceed 0.3% on a dry-weight basis.

We further recommend that standards be established for calibration methods, sample preparation and control samples. This would ensure that we do not potentially face a scenario where what is legal by one method is illegal using another accepted method or even another test using the same method.

SAMPLING

How the crop is sampled plays a major role in the results. This is also an area where it is important that the federal regulations are clear and that every state is using the same sampling procedure to ensure test results are consistent from state to state. Some states just sample the flower material while other states take samples from the flower, leaves and small lateral branches. This difference in sampling can produce dramatically different results from the same plant. The scientific research from which the 0.3% D9-THC distinction between hemp and marijuana originated (Small and Cronquist, 1976) adopted that concentration specifically for "young, vigorous leaves of relatively mature plants as a guide to discriminating [the] two classes of plants." Given that, we recommend that all samples are a composite taken from the whole plant including the flower, leaves and small lateral branches.

TIME BETWEEN SAMPLING AND HARVESET

Another important issue is the time allotted between testing and harvest. THC levels have the potential to rise towards the end of harvest making it is important from a regulatory position to have limits between the time a sample is tested to ensure compliance and when the actual harvest takes place. Some states allow for up to 30 days while some provide a more narrow time frame. The challenge becomes what is the right balance from a regulatory perspective while also taking into account practical considerations such as weather conditions and the logistics of a State Department of Ag being able to get to the farms for sampling in a timely manner. This could be handled by the permit holder submitting their target harvest date to the Dept of Ag 30 days prior to that target date. This would give ample time for the Dept. of Ag, or other licensed person or entity authorized to take samples, to make arrangements to visit that farm 14 days prior to the harvest date to collect the samples. In the event that the sample collectors are unable to visit the grow site in that time frame, or in the scenario where adverse weather conditions or other extenuating circumstances prevent the farmer from harvesting on their target date, there should be a provision to allow for testing to be conducted post-harvest and prior to the crop leaving the farm. While field testing is the more ideal scenario from a regulatory viewpoint there can be a separate sampling protocol to ensure that representative samples can be taken from the harvested crop by requiring samples to be taken from each super-sack or other storage container.

FELON BAN

''(B) FELONY.—

H.R.2—423 ''(i) IN GENERAL.—Except as provided in clause (ii), any person convicted of a felony relating to a controlled substance under State or Federal law before, on, or after the date of enactment of this subtitle shall be ineligible, during the 10-year period following the date of the conviction— ''(I) to participate in the program established under this section or section 297C; and ''(II) to produce hemp under any regulations or guidelines issued under section 297D(a). ''(ii) EXCEPTION.—Clause (i) shall not apply to any person growing hemp lawfully with a license, registration, or authorization under a pilot

program authorized by section 7606 of the Agricultural Act of 2014 (7 U.S.C. 5940) before the date of enactment of this subtitle.

We would like to see this provision implemented only as a restriction on applicants for licenses and not applicable to employees of hemp operations. The principle behind the criminal justice system is rehabilitation and for those who have served their time to be able to assimilate back into society and lead productive lives. With the goal of making hemp a widely used commodity crop, and there being no such restrictions or bans for anyone who works in the industries of corn, soybeans and the like, NHA wishes to see this right extended to all non-permit holders. The Exemption Clause allows this ban to not apply to those that held a license under section 7606 of the Agricultural Act of 2014, supporting the recommendation that this felon ban should only apply to those holding the permit and not those that may be working under the licensed person or entity.

CROSS POLLINATION

While cross pollination concerns are an issue that cannot be practically regulated on a federal level, NHA recommends that there be a regulation that states should collect data pertaining to the type of hemp each permit holder intends to grow and for what end purpose. That information should be made available to the other permit holders in the state in order for them to coordinate with each other based on location and/or for each permit holder to be able to make decisions based on risk assessment.

HEMP FLOWER

While it is unclear at this time where the jurisdiction will be, whether it remains within USDA or is transferred to ATF or another agency, the issue of hemp flower is important and needs to be considered.

Demand for hemp flower has been rapidly increasing over the past year. Many consumers smoke hemp flower as their preferred delivery method of CBD, many smoke hemp flower as an aid in quitting smoking tobacco, and others like to add raw flower into their juicing or other recipes. We have seen an alarming rate of states and cities moving to ban hemp flower despite its clear legality as “All parts of the plant”, under the provisions of the 2018 Farm Bill. While it is understandable that law enforcement may have a difficult time determining the difference between hemp flower and marijuana, it should not be a justification to ban it. While it may within each state’s rights to impose restrictions that the federal government does not impose, based on other case law, an argument could be made that a state banning something that is expressly federally legal could be unconstitutional. Perhaps there could be some guidance for states with recommendations for labeling requirements, certificates of analysis or other means to protect this portion of the industry. Not only does this type of boutique hemp provide a great way to ensure small and diverse cultivators and businesses continue to have a niche in this industry as it grows, it is also important to provide some protection for consumers that may purchase product online or in other states that are unaware of any local or state bans.

IMPORTATION OF BIOMASS

The issue of CBD imports will be outside of USDA’s purview, but the issue of biomass imports will remain within USDA. NHA believes that there should be a ban on foreign imports of biomass from outside of North America. As this industry grows the opportunity to supply the industry should go to American

farmers. In addition, since this crop is only now going to be grown on a true commercial scale, it is still unknown what pests or diseases may become problematic without exposing our farmers to the risks of non-native pests or pathogens.

CONCLUSION

To quote our NHA Chairman, Geoff Whaling, "This is a once in a lifetime opportunity. We will only grasp the staggering potential of hemp if we empower ALL people to participate, regardless of background. We need to get this right!" We acknowledge that implementation of the hemp provisions of the 2018 Farm Bill is a challenging task for regulators as it touches many different federal and state agencies, farmers, businesses and the public.

At the very heart of what we need to move forward is simplicity and clarity. We need regulations that create an even playing field across the country. We need to eliminate the unintended consequences of legal 'gray areas' caused by each state testing differently and operating under a different set of rules and regulations. The hemp industry has been struggling with legal uncertainties for too long and looks forward to reasonable regulations which will afford the opportunity for all to prosper within a clear legal framework.

Thank you for this opportunity to present our positions and for your consideration.