

Kansas Industrial Hemp Update

Industrial Hemp Virtual
Conference
September 29, 2020

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Status of Federal Law & Regulations

- 2014 Farm Bill
 - Authority expires
Nov. 1, 2020

- 2018 Farm Bill
 - Interim Final Rule
Authority expires
Nov. 1, 2021
 - Final Rule?

Table 1: Status of State, Tribe, and Territory hemp production plans updated 9/11/2020

Row Labels	Sum of Number
State	50
Approved Plan (pdf)	23
Drafting a Plan for USDA Review	1
Pending Legislation	1
Pending Resubmission	2
Under Review	16
USDA Hemp Producer License	5
Will continue to operate under 2014 pilot.	2
Territory	3
Approved Plan (pdf)	2
Pending Legislation.	1
Tribe	44
Approved Plan (pdf)	35
Drafting a Plan for USDA Review	3
Under Review	6
Grand Total	97

<https://www.ams.usda.gov/rules-regulations/hemp>



Status of State Regulations

Current Authority and Program

- Research Program; K.S.A. 02-3902 (K.A.R. 4-34-1 - K.A.R. 4-34-21)
 - KDA licenses Growers, Distributors, Processors and State Educational Institutions
 - Advisory Board reviews and approves/denies research proposals
 - Licensees complete research report based on their proposal's objectives
 - Amended regulation, as a result of HB 2167.

Authorized activities with industrial hemp in Kansas (current program)

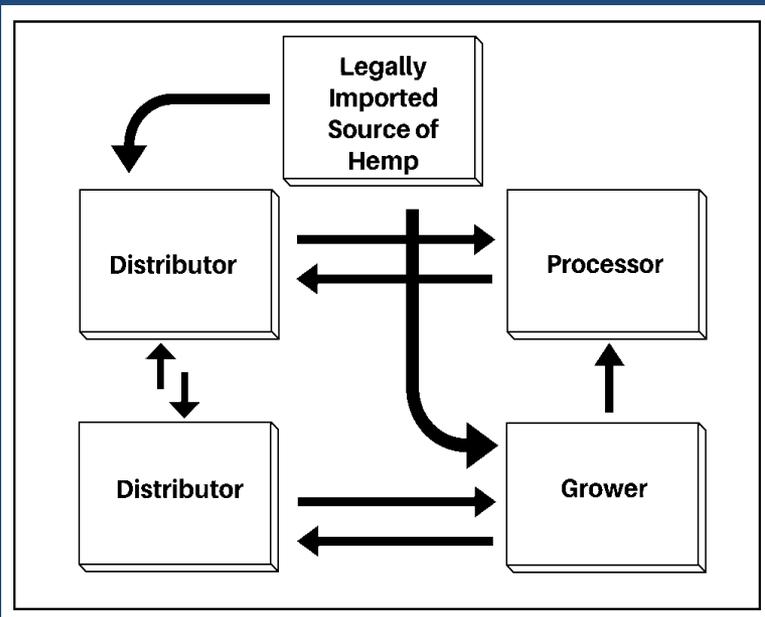


Figure 1: Activities authorized by 2018 Supp. K.S.A. 02-3902. (research, growing, cultivation, distribution, transportation, handling, storing, processing, etc.)

Table 2: Active licenses by type program; 2019 program licenses expired 02/01/2020.

License Type	2019	2020**
Grower	190*	207
Distributor	20	20
Processor	35	23
University***	9	7
TOTAL	254	257

*2019: 23 growers withdrew.

**2020: 207 active growers; 11 growers withdrew and one dist. and processor have withdrawn

***Kansas State University Research and Extension (KSRE).



Activities conducted by licensed growers in Kansas

Table 3: Acreage licensed, planted, and harvested as of 09/28/2020.

Activity	2019		2020		% Increase (Acreage)
	Acreage	# Counties	Acreage	# Counties	
Licensed	~5,800	70	~9,925	71	71%
Planted	2,782	59	3,786*	56	36%
Harvested	1,831	52	NULL	NULL	NULL

- Approximately 98% of the planted acreage is being grown for the floral material [cannabidiol (CBD) or for other cannabinoid production] an increase in roughly 8% from 2019.
- *Planted acreage reported as end-use production.

2019 Acreage



- Row spacing or planting density



- Stand maturity
- Variety



- End-use type

2020 Acreage



Preliminary reports and communication with industrial hemp producers have provided indication of crop loss in 2020 to be more significant than the previous growing season as a result of environmental and producer experience/management constraints.

Licensed Distributors (updated 08/04/2020)

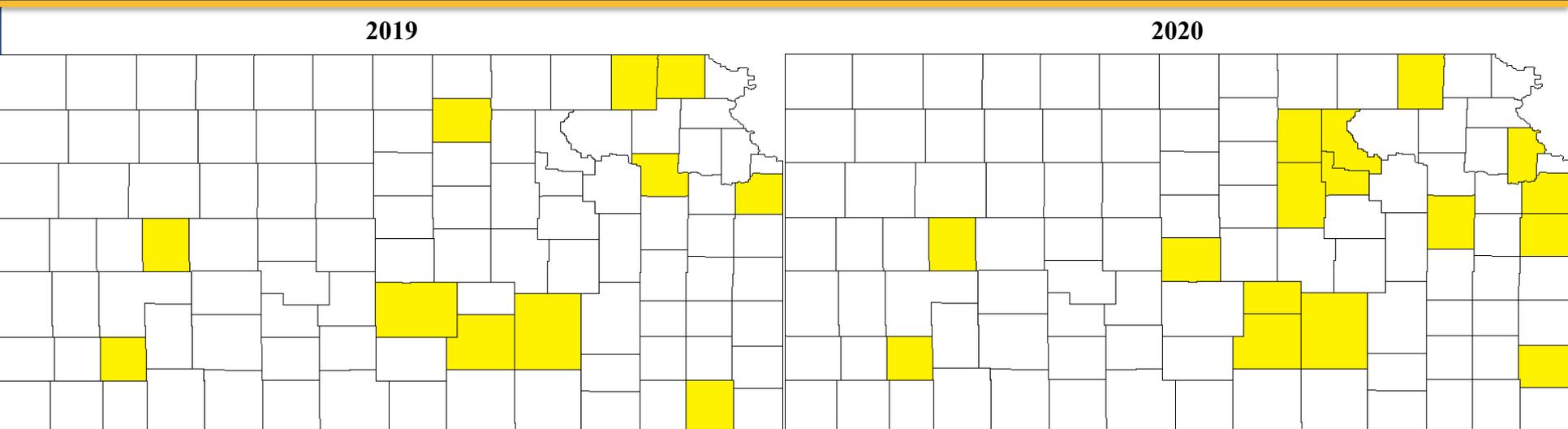


Figure 4: Distribution map of issued distributors licenses by county in 2019.

Table 4: Licensed distributors by county in 2019

County	Licenses	County	Licenses
Brown	1	Montgomery	1
Butler	2	Nemaha	1
Cloud	1	Reno	5
Haskell	2	Sedgwick	2
Johnson	3	Shawnee	1
Lane	1		
Total			20

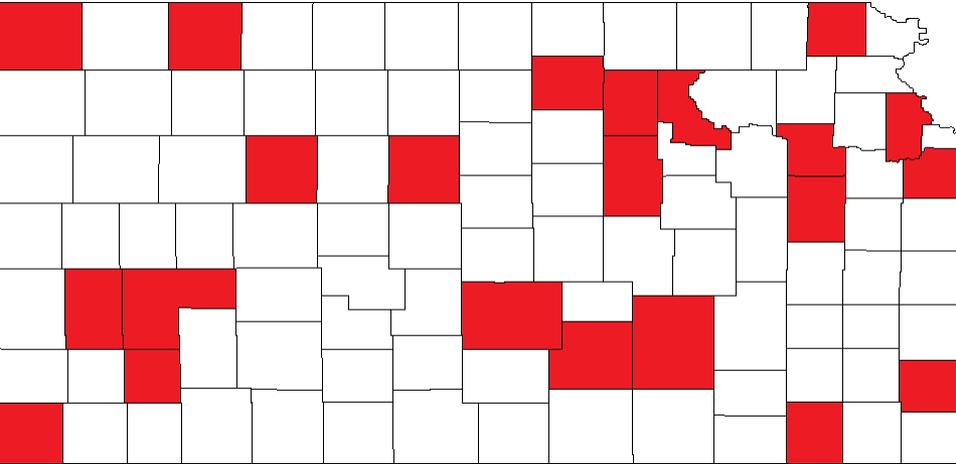
Figure 5: Distribution map of issued distributors licenses by county in 2020.

Table 5: Licensed distributors by county in 2020

County	Licenses	County	Licenses
Butler	1	Lane	1
Clay	1	Leavenworth	1
Crawford	1	Miami	2
Dickinson	1	Nemaha	1
Geary	1	Osage	1
Harvey	2	Rice	1
Haskell	1	Riley	1
Johnson	2	Sedgwick	2
Total			20

Licensed Processors (updated 08/04/2020)

2019



2020

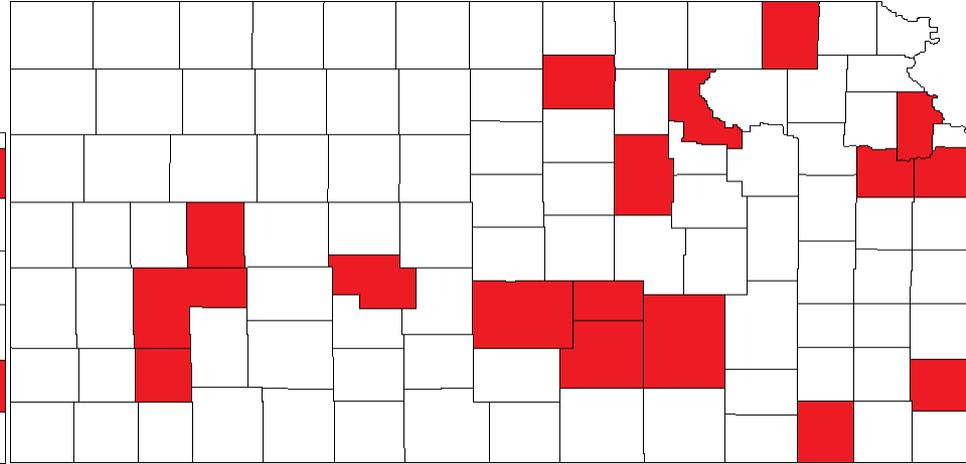


Figure 6: Distribution map of issued processor licenses by county in 2019.

Figure 7: Distribution map of issued processor licenses by county in 2020.

Table 6: Licensed processors by county in 2019

County	Licenses	County	Licenses
Brown	1	Kearny	1
Butler	2	Leavenworth	2
Cheyenne	1	Montgomery	1
Clay	1	Morton	1
Cloud	1	Reno	4
Crawford	1	Riley	1
Decatur	1	Russell	1
Dickinson	3	Sedgwick	3
Finney	1	Shawnee	1
Haskell	1	Trego	1
Johnson	5	Osage	1
Total			35

*Roughly 97% of all active processor licenses are for floral material

**Only 30% of the licensed processors conducted actives in 2019

Table 7: Licensed processors by county in 2020

County	Licenses	County	Licenses
Butler	2	Lane	1
Crawford	1	Leavenworth	3
Dickinson	1	Montgomery	1
Douglas	1	Nemaha	1
Finney	1	Pawnee	1
Harvey	2	Reno	1
Haskell	1	Riley	1
Johnson	2	Sedgwick	1
Total			22

State Educational Institutions

(updated 08/04/2020)

2019

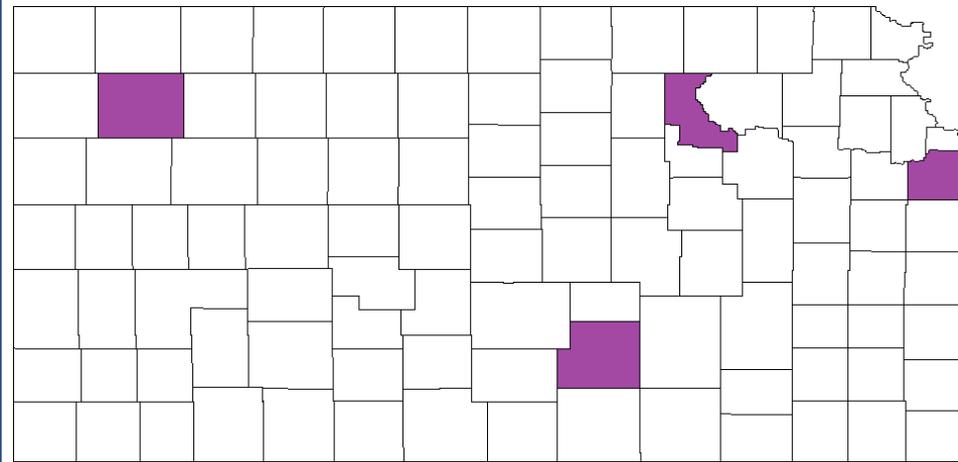


Figure 8: Distribution map of State Educational Institutions licenses by county in 2019.

Table 8: Licensed distributors by county in 2019

County	Licenses
Johnson	2
Riley	5
Sedgwick	1
Thomas	1
Total	9

2020

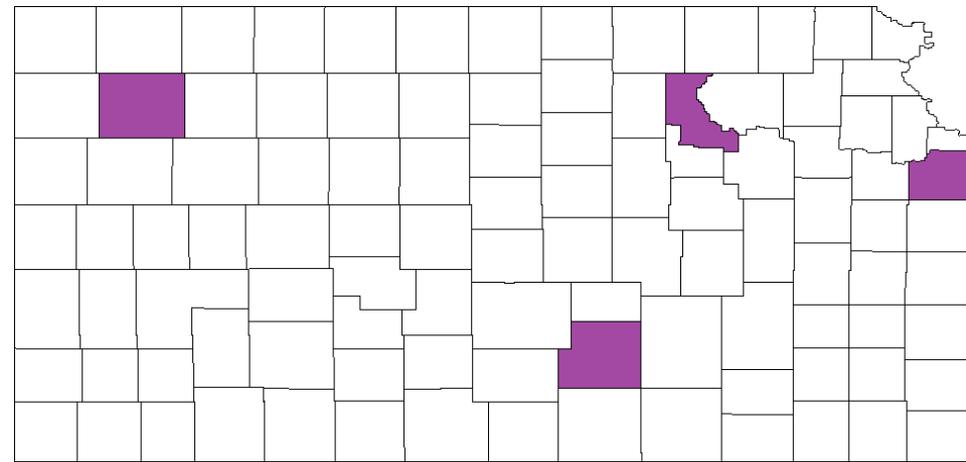


Figure 9: Distribution map of State Educational Institutions licenses by county in 2020.

Table 9: Licensed distributors by county in 2020

County	Licenses
Johnson	2
Riley*	3
Sedgwick	1
Thomas	1
Total	7

*Same licensees participating however less licenses issued

K-State Research & Extension

K-STATE Research and Extension

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Industrial Hemp Resources

Answers to Common Questions:

-No Kansas data exists from the modern agronomic era to guide industrial hemp production decisions. Interested parties are encouraged to consult resources from the industrial hemp research programs at other land-grant research universities such as those at the [University of Kentucky](#), [Purdue](#), and [Cornell](#).

-Producers should understand that industrial hemp produced for fiber, seed, or CBD require very different production systems. Many agronomic and management decisions (including variety selection, planting date, and planting/harvest methods) are unique to the desired end product.

K-STATE Research and Extension Industrial Hemp Research

K-State Industrial Hemp Research
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Page created - November 15, 2019

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K-State Industrial Hemp Research July 17

The honeybees are loving the hemp this week. Look at those packed full pollen sacs. The plot is just humming.



U.S. Domestic Hemp Production Program Requirements

1. Maintain relevant producer and land information

- Collect, maintain and provide real-time information of each hemp producer to USDA contact
 - Licensing hemp producers only.

2. Accurate and effective sampling and testing

- Procedures for how, where, and when to collect samples
- Sampling be conducted by an authorized representative
- Post-decarboxylation or similar testing must not exceed 0.3% THC on a dry weight basis to classify as hemp
- Procedures that prohibit handling, processing, or entering commerce when hemp becomes non-compliant
- Procedures that require hemp testing labs to conform to standards and register with DEA.

U.S. Domestic Hemp Production Program Requirements continued

3. Disposal

- Procedures for disposal of non-compliant plants
- Procedures to notify USDA of non-compliant plants.

4. Inspection Procedures

- Annual inspections where “random sample” of licensed producers is taken to ensure compliance.

5. Collection and dissemination of information with USDA-AMS and FSA

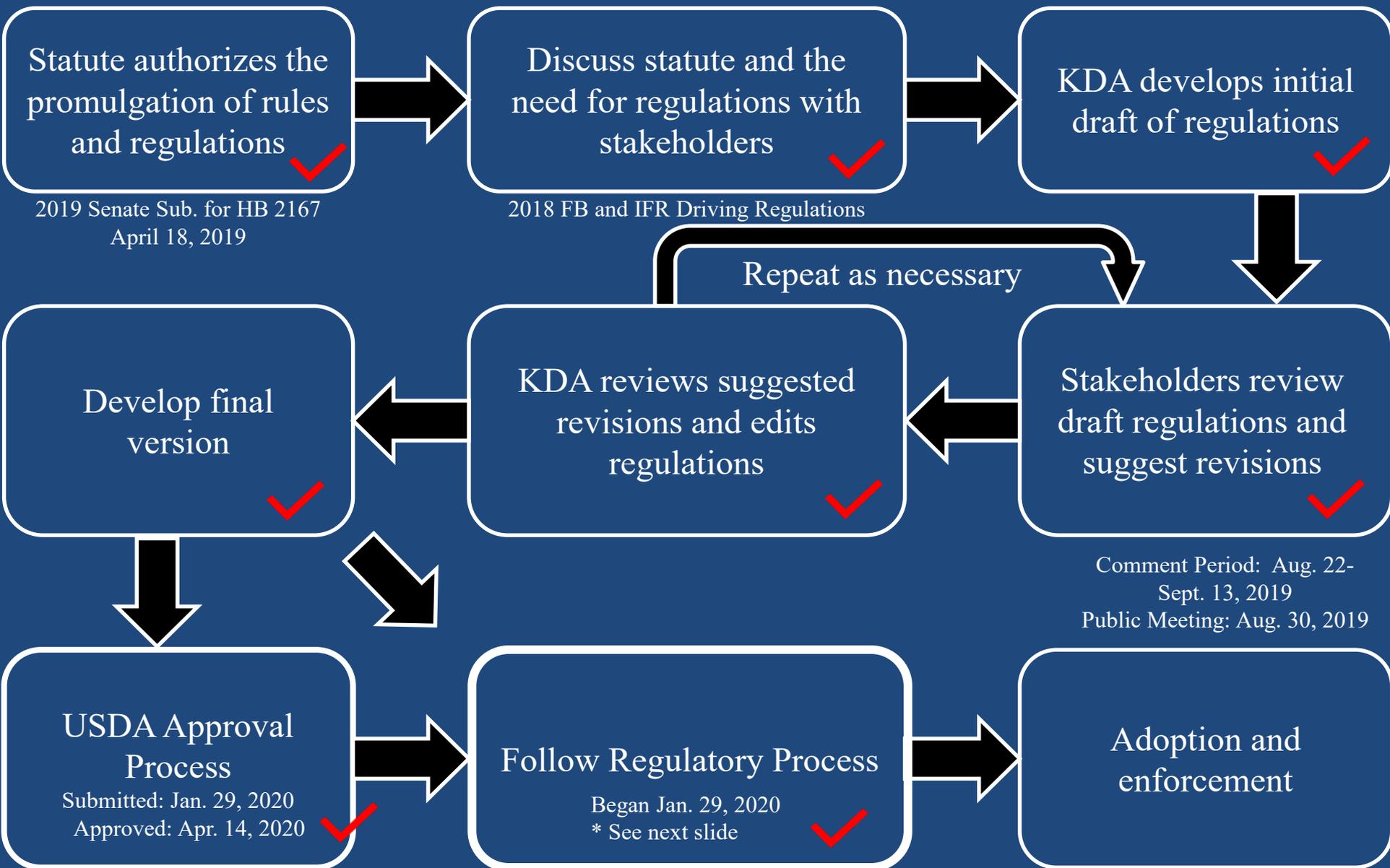
- Hemp producer information (contact, etc.)
- Licensed, planted, harvested and disposed acreage.

Status of State Law & Regulations continued-pending

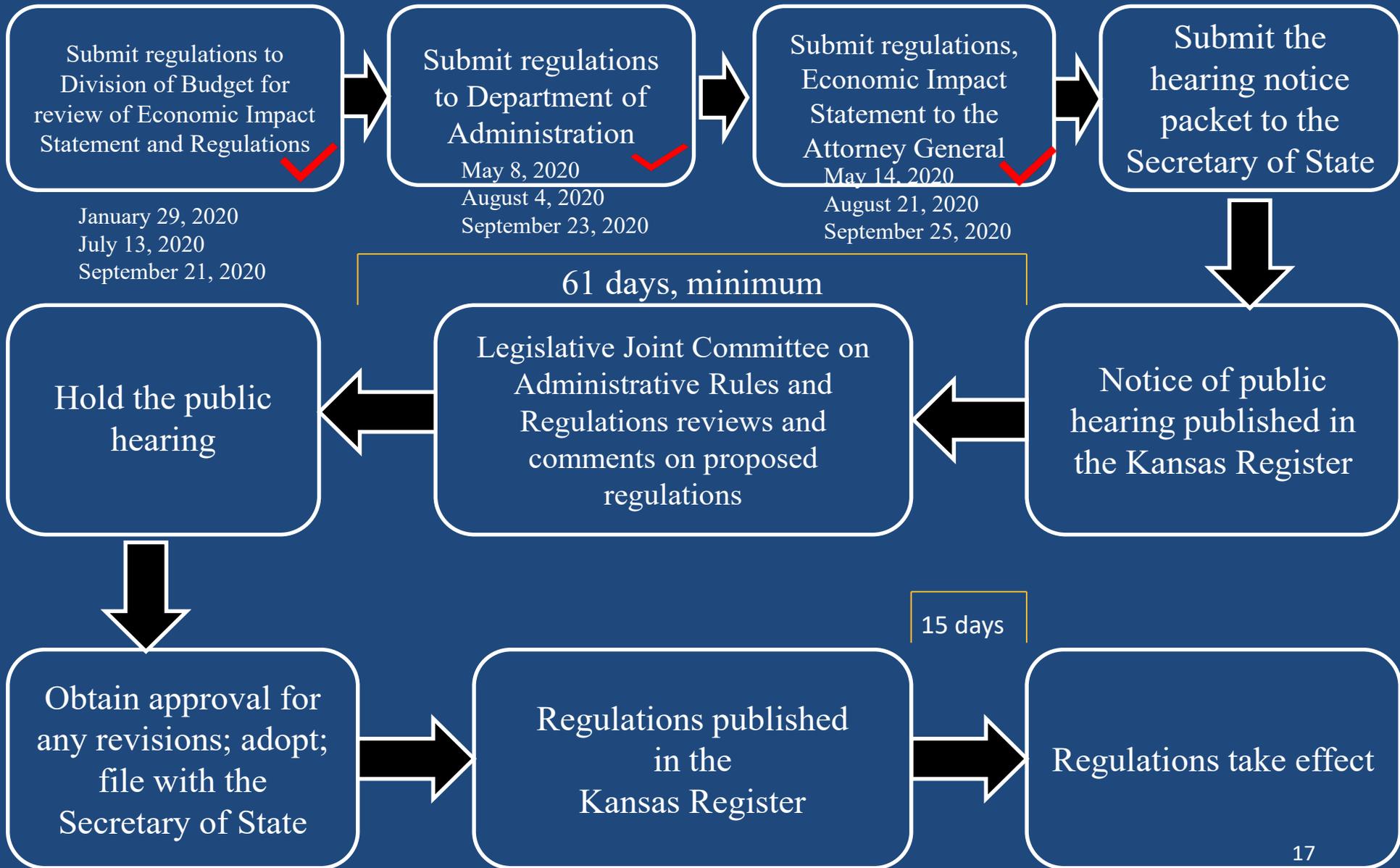
Commercial Program K.S.A. 02-3906 (K.A.R. 4-34-22 - K.A.R. 4-34-35)

- Growers only (includes State Educational Institutions as growers)
- Recently reviewed by Attorney General and revisions were submitted to Division of Budget on September 21, 2020 to go back through the review process.

Developing Commercial Regulations



Kansas Regulatory Process- Commercial Hemp Program



Commercial Hemp Program - Applications

- The availability of 2021 **industrial hemp producer (grower) applications** is dependent on the approval, adoption, and implementation of proposed regulations for the Kansas Commercial Industrial Hemp Program.
- KDA no longer has the authority to register **industrial hemp processors**; persons seeking to process industrial hemp should contact the State Fire Marshal. This includes persons with processing licenses under the research program if they wish to continue processing after December 31, 2020.

Food and Drug Administration (FDA)

- Large concern is the marketing of hemp products that contain CBD or CBD products that make unsubstantial or therapeutic claims to prevent, diagnose, mitigate, treat, or cure serious diseases.
- The FDA indicates CBD is not a risk-free substance.
- Manufacturing issues- CBD products may potentially contain dangerous compounds not listed on the label from extraction and manufacturing processes.
- Rulemaking for hemp products that contain CBD and CBD products can take anywhere from 3-5 years.

Environmental Protection Agency (EPA)

- 10 new pesticide product registrations approved by EPA for use on industrial hemp.
- These new product registrations involve biological and microbial chemicals, which tend to be very low impact on the environment.
- These pesticides must be registered in Kansas and each label should be maintained for use on hemp by the product applicant.
- Approximately, 24 products registered for use on hemp in Kansas to-date.

AAFCO Guidelines on Hemp in Animal Food

(Association of American Feed Control Officials)

- The 2018 Farm Bill did not grant the right to use hemp and hemp products for animal use in animal feed. The FDA also has authority over feed products.
- Hemp and hemp products may not be used in animal or pet food in the U.S.
- AAFCO is asking for research/information on:
 - Hemp seed oil
 - Hemp seed meal
 - Whole hemp seeds.

Predictions? – Moving target

- Industrial hemp regulation and enforcement is going to be extremely dynamic for the next couple years
 - Some states will continue to operate under 2014 Farm Bill until 2021.
- The IFR for domestic hemp production has a two-year sunset where the final rule will be established on or before November 1, 2021. States will know more at that time.
- The Federal Drug and Drug Enforcement Administrations have yet to completely weigh in on industrial hemp as it pertains to the 2018 Farm Bill.

Publications and Reports

- Griffin, Jason; Roozeboom, Kraig; Haag, Lucas; Shelton, Michael; Wilson, Clint; and Myers, Tami. 2020. "2019 Kansas State University Industrial Hemp Dual-Purpose and Fiber Trial," Kansas Agricultural Experiment Station Research Reports: Vol. 6: Iss. 1. <https://doi.org/10.4148/2378-5977.7882>
- Griffin, Jason; Shelton, Michael J.; Wilson, Clint; and Myers, Tami. 2020. "2019 Kansas State University Industrial Hemp CBD Variety Trial," Kansas Agricultural Experiment Station Research Reports: Vol. 6: Iss. 1. <https://doi.org/10.4148/2378-5977.7881>
- Zhao, Jikai & Xu, Youjie & Wang, Weiqun & Griffin, Jason & Wang, Donghai. 2020. Conversion of liquid hot water, acid and alkali pretreated industrial hemp biomasses to bioethanol. *Bioresource Technology*. 309 <https://www.sciencedirect.com/science/article/pii/S0960852420306556>
- Kleinhenz, M.D., Magnin, G., Lin, Z. et al. 2020. Plasma concentrations of eleven cannabinoids in cattle following oral administration of industrial hemp (*Cannabis sativa*). *Sci Rep* 10, 12753 <https://doi.org/10.1038/s41598-020-69768-4>
- Michael D. Kleinhenz, Geraldine Magnin, Stee M. Ensley, Jason J. Griffin, John Goeser, Eva Lynch, Johann F. Coetzee. 2020. Nutrient concentrations, digestibility, and cannabinoid concentrations of industrial hemp plant components. *Applied Animal Science*. Volume 36, Issue 4. Pages 489-494. <https://doi.org/10.15232/aas.2020-02018>.
- Kansas Levitative Division of Post Audit. 2020. Kansas Department of Agriculture: Evaluating the Economic Impact of Hemp Production in Kansas. <https://www.kslpa.org/audit-report-library/kansas-department-of-agriculture-evaluating-the-economic-impact-of-hemp-production-in-kansas/>

2019 K-State Industrial Hemp Research Reports accessible via:

- [Department of Agronomy, Manhattan – Plots were lost due to excessive rainfall](#)
- [Dr. Raymond Cloyd Research](#)
- [Dr. Cary Rivard Research](#)
- [Dr. Eleni Pliakoni Research](#)
- [Dr. Jason Griffin Research](#)

KSU/KDA. Kansas Hemp From the Ground Up Western Economics Forum *in review*



Part of the Solution: Leveraging Partnerships to Educate Kansans in the Evolving World of Industrial Hemp

Dana J. Ladner* and Braden Hoch, Kansas Department of Agriculture
Jason Griffin and Lucas Haag, Kansas State University



K-STATE
Research and Extension

Introduction:

The 2014 and 2018 Farm Bills legalized the growing of industrial hemp in the United States and permitted interstate commerce. As a new regulated commodity crop, Kansas regulatory agencies and educational institutions believe it is vital to provide science-based education statewide to growers, distributors and processors.

Objective:

The Kansas Department of Agriculture (KDA) teamed with K-State Research and Extension (KSRE) to reach stakeholders across the state, and into neighboring states, to discuss the rules and regulations necessary to reintroduce industrial hemp into the state. In addition, KSRE presented production and cultural considerations to familiarize this crop to a new generation of farmers.

Method:

Face-to-face meetings were most effective in reaching stakeholders on introducing industrial hemp to Kansans. Additional outreach to countless individuals across the region was accomplished via newspaper and magazine articles combined with webinars, television and radio reports, webpages, social media outlets and individual consultations.



Photo 1. Braden Hoch provides an overview of industrial hemp rules and regulations on May 22, 2019. The event was held in Pratt and sponsored by Wichita State University, Small Business Development Center.

Results:

From May 2018 through March 2020, the KDA/KSRE partnership:

- Reached nearly 3,700 individuals in face-to-face meetings
- Presented at 72 unique events
- Accepted invitations to speak from 66 distinct groups
- Traveled to events held in 27 different locations in Kansas, 2 in Missouri and 1 in Nebraska



Photos 2 and 3: Dr. Jason Griffin, Braden Hoch and Dana Ladner present information during the Kansas Law Enforcement Field Day on August 8, 2019. Nearly 80 officers

- Traveled to 24 Kansas counties
- Highlighted in 3 magazine articles and numerous newspaper articles
- Interviewed for 8 television segments
- Supervised 4 student employees



Photo 4: Dr. Jason Griffin gives a television interview at the February 4, 2020, KSRE Industrial Hemp Industry Conference in Wichita. Over 220 stakeholders attended the one-day conference.



Photo 5: K-State student employees were involved in the first year of industrial hemp research field trials at the John C. Pair Horticulture Center in Haysville. Grant dollars were provided by KDA and the Kansas Water Office.

Conclusion:

As the industrial hemp industry grows at a rapid pace and as federal and state regulations evolve, it is vital that regulatory, extension and academic units work collaboratively, as one voice, to provide steady and reliable guidance to the state's industry. Rather than ignoring the wave of excitement around industrial hemp, Kansas embraced it and combined expertise within the state to meet the needs of its residents.

Questions?

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Thank you for your time.
Have a great afternoon.