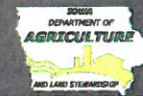


2014 Farm Bill
Section 7606

Industrial Hemp

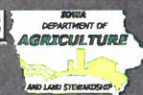
- The term “industrial hemp” means the plant *Cannabis sativa L.* and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol (THC) concentration of not more than 0.3 percent on a dry weight basis.



2014 Farm Bill
Section 7606

Relief from Federal DEA Regulations ...

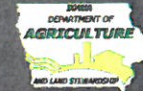
- An institution of higher education or a State department of agriculture may grow or cultivate industrial hemp if:
 - 1) The industrial hemp is grown or cultivated for purposes of research conducted under an agricultural pilot program or other agricultural or academic research; and



2014 Farm Bill
Section 7606

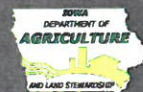
Relief from Federal Regulations ...

- 2) The growing or cultivating of industrial hemp is allowed under the laws of the State in which such institution of higher education or State department of agriculture is located and such research occurs.



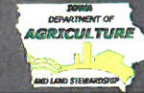
delta-9 tetrahydrocannabinol (THC)

- THC the chemical responsible for most of marijuana's psychoactive effects.
- Marijuana and industrial hemp come from the same plant, *Cannabis sativa*.



Cannabinoids

- There are ~500 identifiable chemical constituents known to exist in the cannabis plant.
 - 85 cannabinoids - a class of diverse chemical compounds that acts on cannabinoid receptors that alter neurotransmitter release in the brain.
- The two cannabinoids usually produced in greatest abundance are THC and cannabidiol (CBD).



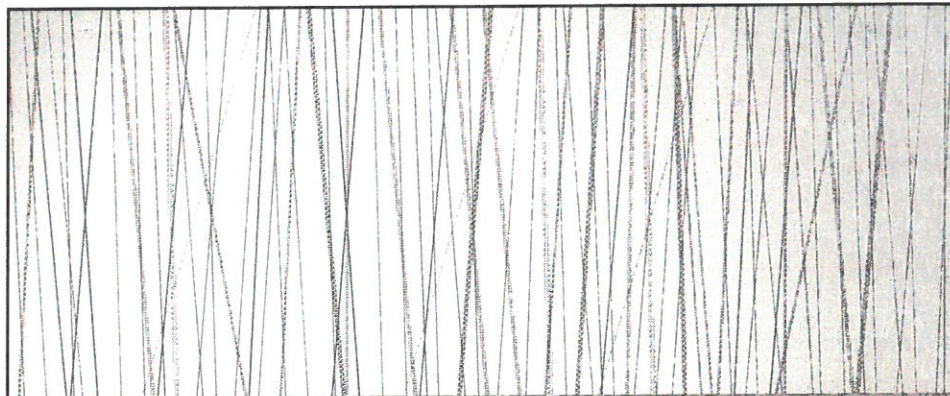
Background

- Distinct male and female plants.
 - Although, monoecious plants do occur.
- Ratio of THC to CBD seems to be genetically determined, overall cannabinoid content affected by genetics, seed set, flower maturity, harvest date, environment - weather, pests, moisture, soil fertility, ...

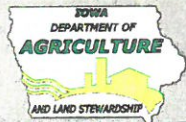



Medical vs. Industrial

- Is CBD oil production medical or industrial?
 - In **Colorado**, CBD oil is industrial production.
 - In **Minnesota**, CBD oil is medical production.
- Kentucky 2016 example, 2,300 acres**
- 60% = CBD oil production
 - 34% = grain & seed production
 - 6% = fiber production

A photograph of a hemp field with tall, thin stalks, serving as a background for the text.

...Brass Tacks
considerations for starting I-hemp program
based on experience in other states

The logo for the Iowa Department of Agriculture and Land Stewardship, featuring a stylized yellow and green outline of the state of Iowa with the text "IOWA DEPARTMENT OF AGRICULTURE AND LAND STEWARDSHIP" around it.



COLORADO
Department of Agriculture
Division of Plant Industry


Seed Supply

Availability of Industrial Hemp Seed (Feb '15)

- Issue: There is very little industrial hemp seed in Colorado to support a growing interest in industrial hemp production.

There is a small amount of hemp seed being produced in Colorado since the passage of the Colorado Industrial Hemp Act in 2013. However most of this seed is highly variable in quality, is not a specific variety and THC levels remain uncertain. There are currently no varieties certified to produce plants that remain below 0.3% THC and thus no certified seed.


<https://www.colorado.gov/pacific/sites/default/files/atoms/files/Issue%20Paper%20on%20Hemp%20Seed%20Availability%20Final%202015.pdf>



Seed Supply

Seed Certification & Seed Source...

- Seed is certified is based on phenological characteristics.
 - Additional characteristics can be requested
- Certification in other countries may not be as rigorous as we think/like.
- Even certified seed performs differently in different environments.



Pollination

Wind Pollination...

- 2015 report from Oregon Cannabis Connection – “In these studies pollen drift was observed across 3 to 7.5 miles. A fourth study showed pollen drift for 30 miles across the Mediterranean Sea from Morocco to Spain.”

The Cannabist, <http://www.thecannabist.co/2015/06/18/safe-distance-hemp-marijuana-pollination/33130/>



Pollination

The Cannabist continued...

- “We don’t have sea winds carrying hemp pollen into Colorado, but it can be windy nonetheless. According to Hermann, a safe starting distance between marijuana and hemp plants is 10 miles. “There is no scientific backing to guarantee that distance, but it is a safe starting point.”




Pollination

What is THC in feral cannabis in Iowa?

- Well, we don't know. But, if $>.3\%$, we have a problem.


Distance (miles)	Area (sq miles)
7.5	177
15	707
30	2,826

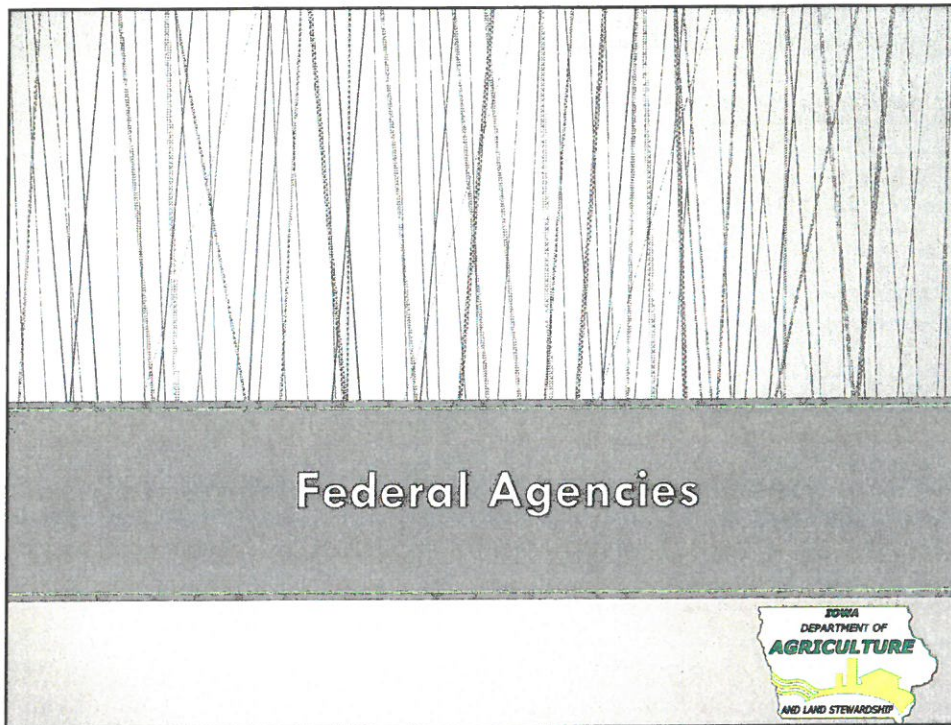


Weediness

What's left in the field...

- Colorado** producer reported that he felt he lost ~ 20 lb. seed per acre during harvest.






Federal Agencies

- Seed cannot move from state to state under current regulations.
- **DEA** Registration needed to import seed.
Two registrations —
 - Importer
 - Schedule I researcher
- May need to track every seed then distributed out from the import.

use a broker!



Farm Bill Section 7606

The 2014 Farm Bill section is key to obtaining a permit from DEA to import seed. Must specifically reference Farm Bill language in permit application.

- **Minnesota** applied for single permit & then distributed to growers.
- **Colorado** lets growers row their own boat.



Federal Agencies

USDA

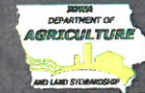
- Issues Import Permits.
 - Considers pest risks associated with bringing seed in from other countries.
- Inspected at port, can deny or require treatments for pests at entry.
- Federal Seed Act labeling required.



Federal Agencies

NRCS

- NRCS has no national policy. Once producing hemp, not eligible for assistance.
- If commercial production occurs = NRCS violation.



Other Federal Agencies

FSA

- You can plant I-hemp... but payment eligibility affected if convicted of illegal substance, for year convicted and next four years.
- Lenders are required to comply with all state and federal regulations...



FSA continued

CFR § 764.401 Loan decision.

(b) Loan denial.

The Agency will not approve a loan if it determines that: ...

(7) The applicant, the farming operation, or other circumstances surrounding the loan are inconsistent with the authorizing statutes, other Federal laws, or Federal credit policies.

CFR § 762.128 Environmental and special laws.

(e) Other Federal, State and local requirements.

Lenders are required to coordinate with all appropriate Federal, State, and local agencies and comply with special laws and regulations applicable to the loan proposal.



Other Federal Agencies

EPA

- Cannabis is not a specifically listed crop on any current pesticide label.
- **Colorado** has identified 269 pesticide products that can be used a cannabis and not be a violation because
 - a) broad label language,
 - b) active ingredients are exempt from a tolerance requirement



Thank You

Robin Pruisner

(515) 725-1470

Robin.Pruisner@IowaAgriculture.gov

