

Colorado's Industrial Hemp Program Update

Aug 15, 2017 National Plant Board Meeting



Resources Utilized

Colorado's Industrial Hemp Program is a part of the Dept. Of Agriculture's Division of Plant Industry. The Staff includes:

Program Manager

Seed Certification Specialist

2 Administrative Assistants

the support of 10 field inspectors for sampling, a significant amount of the Division Director and Assistant Directors' time as well as attorney time

This does not include 10 field inspectors or 4 enforcement specialists to deal with WPS and pesticide use on Cannabis

GROWTH SUMMARY

<u>2014</u>	<u>Year One Totals</u>
Registered Acres	1811
Registered Sq.. Ft	253,000
Registrations	259
Registrants	131

<u>2015</u>	<u>Totals</u>	<u>INCREASE OVER PRIOR YEAR (YEAR ONE- 2014)</u>
Registered Acres	3657	~102%
Registered Sq. Ft	570,980	~126%
Registrations	333	~29%
Registrants	166	~27%

<u>2016</u>	<u>Totals</u>	<u>INCREASE OVER PRIOR YEAR (2015)</u>	<u>INCREASE SINCE 2014</u>
Registered Acres	8988	~145%	~396%
Registered Sq. Ft	1.36 Million	~138%	~438%
Active Registrations	424	~27%	~64%
Active Registrants	312	~88%	~138%

What does 2017 look like?

Registration in Colorado's Industrial Hemp Program is a 365 day process so acres and sqft is a snapshot in time. Our last outdoor registration (so far) was done on Aug 2nd.

As of last week we had 512 registered land areas accounting for 12,401 acres of outdoor production and 2,090,500 sqft of indoor space.

How does the program work?

The program has 3 key components:

- 1) Registration -who is involved and where is it being grown
- 2) Reports-Pre-Planting, Planting and Harvest
- 3) Inspection and Sampling- Risk and Random based selection

Inspection and Sampling:

All registrations are subject to inspection and sampling either scheduled or without notice.

All land and buildings within the registered land area are subject to inspection.

All Cannabis plants within the registered land area are subject to sampling.

Registrants wishing to close a registration early are subject to sampling.

The provisions are designed to protect public safety.

What the did 2016 testing results look like?

The CDA inspected 6006 acres of outdoor production and an additional 434,043 sqsf of indoor space in 2017. This includes verifying DNP as reported by registrants on 656 acres outdoors and 122,670 sqft of indoor production space.

75% of the samples met the compliance standard. The 25% that failed to meet the 0.3% THC compliance standard represented 1232 acres of outdoor production and 3,650 sqft of indoor growing space.

Of the 1232 acres of outdoor space 957 acres or 78% of the non-compliant acres were planted in **three** groups as identified by the registrants at planting, Colorado Gold (78%), Rocky Hemp (100%) and US Landrace (25%).

We looked at inspector trends, geographic trends, time/distance transportation trends and overwhelmingly the variety planted was the single most important factor in the THC level for compliance.

Propagation Material

Industrial hemp is propagated both from seed and from cuttings. Most CBD material is propagated via cuttings while most other uses are done from seed.

25% of the varieties imported for research purposes have exceeded the 0.3% THC limit.

Until 2017 the CDA has imported very little material for production and does not provide production stock to growers. For the 2018 growing season the CDA has already imported 30 metric tons of seed for one university's economic development study.

The CDA Approved Certification Process

The process includes four parts.

- 1) Application including eligibility documentation. (CDA & CSU)
- 2) THC Testing for variety approval. (CDA)
- 3) Certified Seed Production from Registered or Foundation seed. (CSU/CSGA according to AOSCA Rules)
- 4) Labeling requirements. (CDA/ CSU/CSGA)

It is more than a variety list is a production system to insure breeders investments are protected and farmers get seed that will produce mature plants with a THC below 0.3%.

Some of the Key Seed Quality Issues

Lack of standards for what material is to be tested;

Lack of how testing occurs and what is included;
THC /THCA

Seed Dumping and Mislabeling

The Dilution Factor

The marijuana industry only grows female plants because they are higher in THC than their male counterparts. Trim, the fan leaves are not a primary product because levels of THC are 10 to 30% of the flower.

THC concentration test confirmed that female flowers contained significantly higher levels of THC concentration than in any other part of the plant and higher than male plants of the same variety in industrial hemp as well.


So the percent non-flower material significantly lowers the THC concentration reading of the sample.

THC Concentrations & THCA Ratios

This is an actual lab tests from flower material.

Note the THC and the THCA levels. At .28% THC only this is industrial hemp. Converting THCA using molecular weight of .877% and this is equal to 22.27% THC concentration; true high grade MARIJUANA.

CANNABINOID PROFILE		
CANNABINOID	%(w/w)	mg/g
THC	0.28%	2.8
THC-A	25.07%	250.7
CBD	0.00%	0.0
CBD-A	0.92%	9.2
CBN	0.00%	0.0
CBG	0.09%	0.9
TOTAL CANNABINOIDS	26.36%	263.6



Seed Labeling

Because the Federal Seed Act is not being enforced the U.S. has become the dumping ground for low quality and mislabeled industrial hemp seed.

30 metric tons of foundation seed?

Germination below standards

Off types in grow outs

Questions?