

Industrial Hemp in North Carolina



Steve Troxler, Commissioner of Agriculture
North Carolina Department of Agriculture & Consumer Services

What is Industrial Hemp?

- *Cannabis sativa* L. with a post-decarboxylation delta-9 THC concentration of 0.3% or less.
- Many uses
 - Fiber/Hurd (stem/inner stem)
 - Food (seeds & oil)
 - Pharmaceutical extracts from floral bracts (subject to FDA regulations [CBD])



Role of NCDA&CS

Research Stations

- receive industrial hemp seed shipments at secure storage site and assist Plant Industry Division with distribution to licensed growers
- work with researchers conducting work at NC Research Stations

Plant Industry Division

- Verify and process industrial hemp grower applications
- Maintain current DEA registration for NCDA&CS and acquire DEA import permits so licensed industrial hemp growers may order hemp seed from foreign sources and while overseeing industrial hemp seed distribution
- Collect license fees and transfer to the NC Industrial Hemp Commission
- Sample industrial hemp fields/greenhouses for THC levels and delivery to the Food and Drug Lab

Food and Drug Division

- Analyze Industrial hemp samples for THC levels and report to Plant Industry the findings

Agronomic Division

- Work with licensed industrial hemp growers to assist with agronomic issues with this crop



RULES

- The Industrial Hemp Commission has adopted temporary rules:

02 NCAC 62.0101-.0109



NC Industrial Hemp License Rules Highlights

- Must meet a research objective in cooperation with NCSU or NCA&T (as identified in statute).
- All plantings subject to THC sampling at any time with no prior warning.
- Verified Propagules
 - Seed
 - Clones from an IH plant from which THC testing confirms it meets the Federal law
- One- or Three-year license option.
- Must provide all locations, storage, and intended market.
- Fees
 - \$250 (<50 acres) or \$500 (>50 acres) initial fee.
 - \$250 annual fee, plus \$2/acre or \$2/1,000 sq ft of greenhouse.



NC Industrial Hemp Program Information Websites

<http://www.ncagr.gov/hemp/>

<https://industrialhemp.ces.ncsu.edu/>



Application Highlights

- *Name and address of Applicant
- *Duration of License 1 or 3 year
- *Intended planting location-address, GPS coordinates of acreage or greenhouse sq. ft.
- *Intended Market- Seed, Fiber, Flora parts
- *Written statement of research objective
- *Evidence of Farming Income (Taxes)
- *Storage Location-GPS Coordinates required
- *Attestations



Felonies & Licensure

*Applicants shall disclose the date and location of any conviction of any criminal offense (other than misdemeanor traffic offenses) committed in any jurisdiction. Failure to comply with this requirement in a complete and truthful manner shall be grounds for denial, suspension, or revocation of a permit, as may be determined by the Industrial Hemp Commission.

- * The following applicants shall not be granted a permit:
- (1) Any applicants with any felony conviction in the prior 10 years or; or
 - (2) Any drug-related or controlled substance felony conviction at any time.
 - (3) Applicants that fail to complete the application process...



NC Industrial Hemp License Example

2021

Application ID

North Carolina Industrial Hemp Commission
Thomas Melton, Chair of the Commission
License Document

NOT TRANSFERABLE
Statute 106-50

LICENSE TYPE: Industrial Hemp - Research With Intent to Market
DURATION: Three Years
EXPIRATION DATE: 06/25/2021
ISSUE DATE: 06/25/2018

LICENSEE
OR
CERTIFICATOR



A handwritten signature in black ink that reads "Thomas A. Melton".

Thomas Melton, Chair of the Commission

THIS LICENSE MAY BE SUBJECT TO REVOCATION OR SUSPENSION AS PROVIDED BY LAW



Industrial Hemp Seed and Plant Sources

- International
 - Italy
 - Canada
 - Czech Republic
 - Lithuania
 - France
- Domestic*
 - North Carolina
 - Oregon
 - Colorado
 - Kentucky
 - Tennessee



Plant Industry Division Sampling

- Conduct Sampling of Industrial Hemp Fields for THC levels with the assistance of 9 Seed and Fertilizer Specialists along with the Seed and Fertilizer Field Supervisor
- The 2019 NC General Assembly has observed the program growth and has committed to providing NCD&CS with 4 additional hemp inspectors in order to maintain a strong industrial hemp regulatory program



Industrial Hemp Field Sampling



https://apps.ncagr.gov/agrsysportal/industrialhemp/samplerequest

NC Industrial Hemp Sample Request Form

Please note:

- For multiple counties, please submit a form for each county.
- If more than 3 varieties are flowering, submit an additional form as needed.
- **Variety photos:** Clear/close-up of side view of the blooming inflorescence. For further information on photos, please click [here](#).

Licensee Name

Contact Name

License Number

Preferred Email

Preferred Phone

Flowering County

ALAMANCE



Harvest Date

Initiation of Flowering Date

Maximum



Industrial Hemp Field Sampling

- The early notification is to allow for the scheduling of sampling.
- Sampling will occur 3-5 weeks into flowering.
- This level of maturity will be more indicative of the THC levels obtainable by the plant without end of flower spiking.



Industrial Hemp Floral Maturity



Initiation of Buds

Appropriate Maturity



Late/Over Mature



Sample Collection

- The number of buds sampled will depend on the overall sample size.
- The more acreage, the more plants need to be sampled to get a “representative” sample.
- In the case of small acreage or greenhouse setting, 10 plants is a standard number of samples



Industrial Hemp Compliance Testing

- North Carolina started and still tests using the Gas Chromatography-Flame Ionization Detector method (GC-FID) which decarboxylates THCA into delta-9 THC.
- The bulk of testing is done by a private lab that we have a contract with and this allows for more samples with faster turnaround.
- However, if a sample tests above the legal THC% limit, then our NC State Food and Drug Laboratory will conduct a confirmation test.
- All Regulatory actions for samples above the THC% limit are based upon NC Food and Drug Laboratory testing.



Sample Collection

- Samples can be for a variety, the whole farm, a field of comingled varieties etc.
- Top 3-5" of the plant, specifically the flowers/inflorescences/buds because THC content is highest in these plant parts.
- Plants randomly selected among field or greenhouse



2017 Industrial Hemp Sampling Results

- 135 Industrial Hemp regulatory samples collected in North Carolina
- 14 Industrial Hemp regulatory samples tested above the 0.3% limit



2018 Industrial Hemp Sampling Results

- 437 Industrial Hemp regulatory samples collected in North Carolina
- 47 Industrial Hemp regulatory samples have tested above the 0.3% limit



2019 Industrial Hemp Sampling Results (To Date)

- 607 Industrial Hemp regulatory samples collected in North Carolina
- 42 Industrial Hemp regulatory samples have tested above the 0.3% limit

Risks in the Industrial Hemp Industry

- Growing hemp is expensive and labor intensive.
- Hemp genetics do not have the years of testing that other crops have, especially in our climate.
- Hemp has insect pests, gets disease, and doesn't like wet feet.
- If you fail your THC compliance tests your crop will be destroyed.
- If your crop is healthy and passes testing, your end product may not be marketable if THC content goes high after State testing or due to pesticide/heavy metal residues, or other factors.
- Hemp can be difficult to dry especially in regards to eliminating/preventing mold issues.







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North Carolina Industrial Hemp Program 2018-19 Expansion

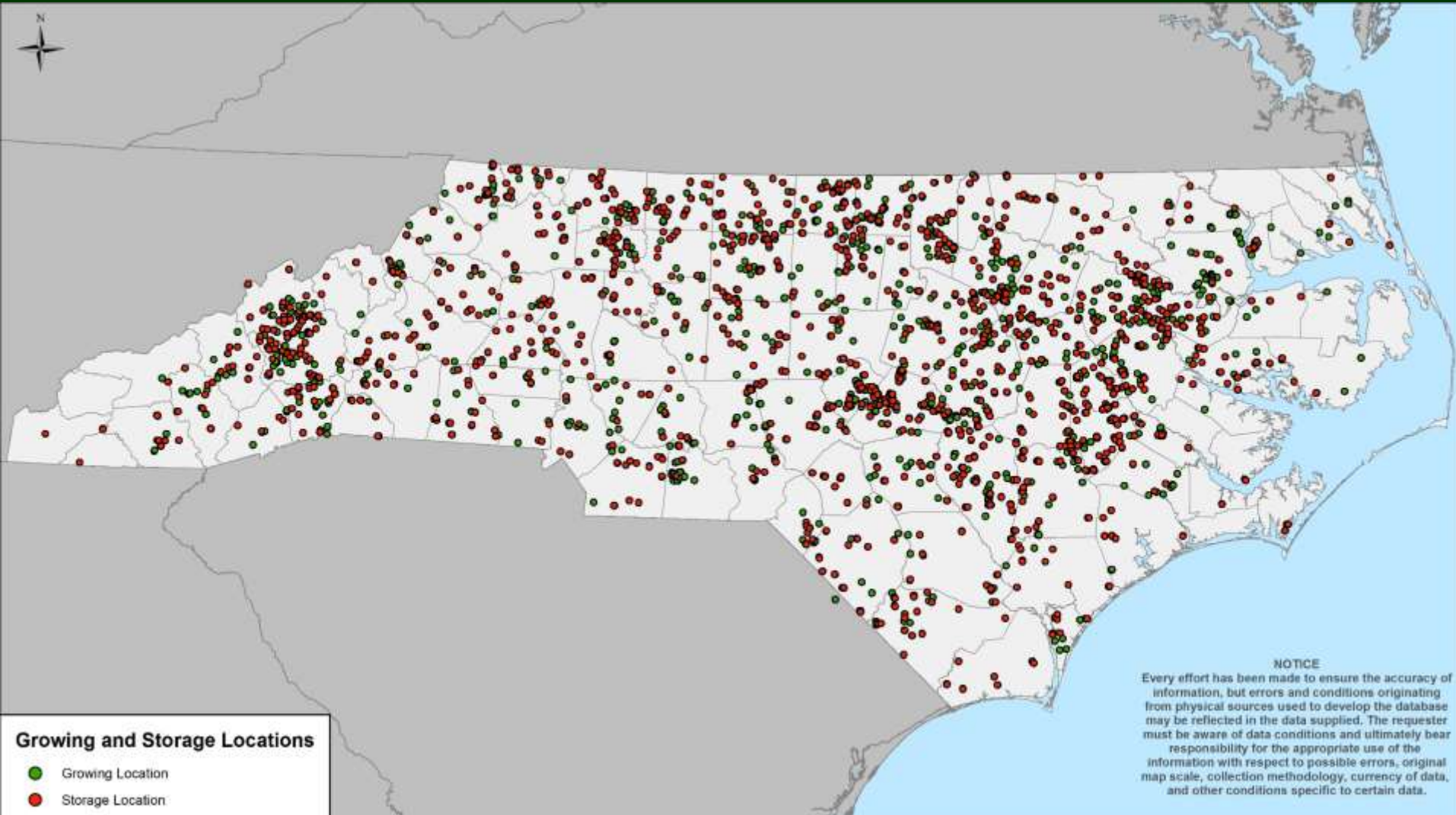
- * June 6, 2018- 306 Licensed Growers
4548 Licensed Acres
672,274 Licensed
Greenhouse sq. feet**
- *January 7, 2019- 438 Licensed Growers
6077.08 Licensed Acres
2,524,422 Licensed
Greenhouse sq. feet**

Current Industrial Hemp Program Participants

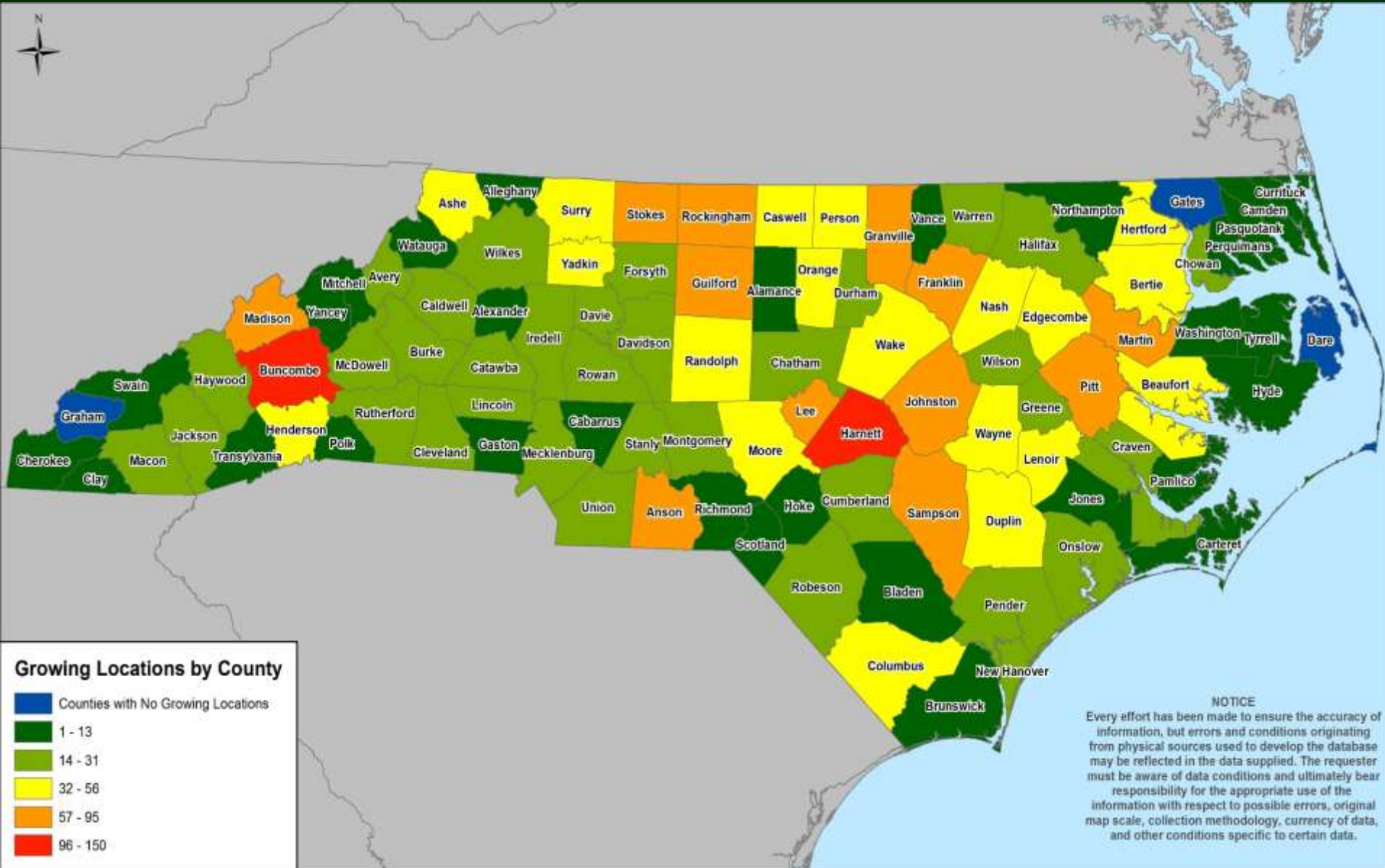
- **1259** Licensed Industrial Hemp Growers
- **15,198** Licensed Field Acres
- **5,642,488** Licensed Square Feet of Greenhouse production
- **633** Registered Industrial Hemp Processors



Licensed Hemp Growing and Storage Locations, July 2019



Licensed Hemp Growing Locations by County, July 2019



2018 Farm Bill Details

- **Nothing affects or changes what is currently in the Food, Drug and Cosmetic Act.**
- **Allows states to regulate hemp production based on a state or tribal plan submitted to USDA.**
- **Plan must include – info on locations of hemp production, testing for THC, disposal of plants.**
- **States can put more restrictive parameters on the production of hemp but cannot alter the definition of hemp or put in place less restrictive policies.**
- **The Secretary must approve plans within 60-days. The final decision is made by the Secretary, but the Secretary must consult with the Attorney General.**
- **The Secretary has the authority to audit plans' compliance.**

2018 Farm Bill Details

- **The Secretary must provide technical assistance to states/tribes on plans.**
- **Any person convicted of a felony relating to a controlled substance cannot participate for a 10-year period following the conviction date – however, if they are already lawfully participating in a state hemp pilot project prior to the enactment of this bill, they can continue.**
- **USDA must develop a plan for those states that do not submit their own plan.**
- **USDA will keep and maintain “real-time information” regarding licenses.**
- **Encourages USDA to enter into a MOU with law enforcement.**
- **USDA will issue rules/guidelines, in consultation with the Attorney General.**

Contact Information

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QUESTIONS?



Thank you for your support of
North Carolina Agriculture

