



**Rooted in Georgia.  
Ready for the Revolution.**

# History of hemp in the U.S.

01

Hemp was an important crop in colonial America and throughout the 1800's.

02

Domestic hemp's dominance in the U.S. took a significant downturn in 1937 with the passage of the Marijuana Tax Act

03

Synthetic fibers created by Dow and DuPont made hemp more obsolete

04

1970 Controlled Substances Act classified hemp as an illegal schedule I drug.

## 2014 Farm bill

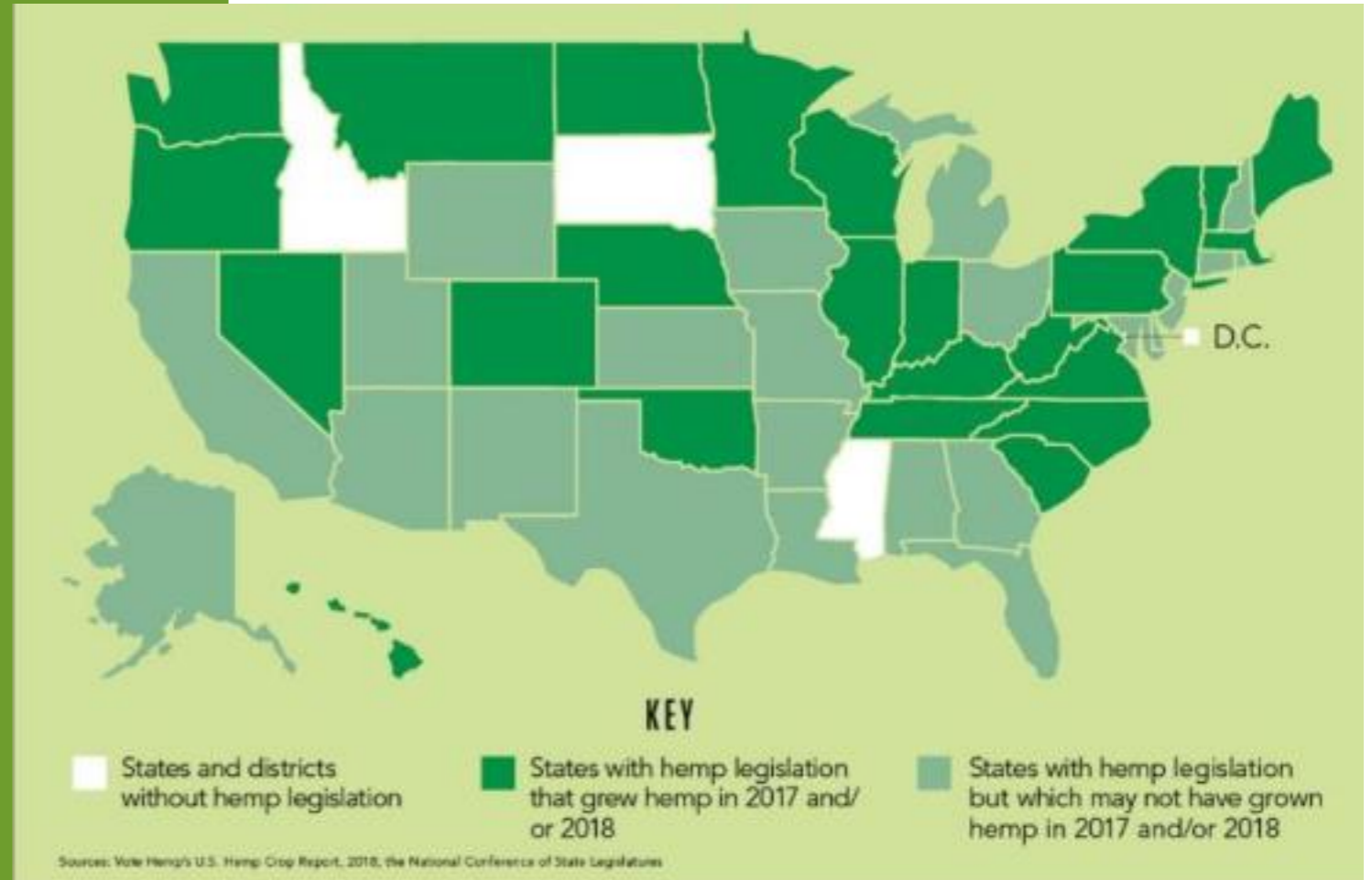
allowed pilot programs for hemp research. Many states had pilot programs (Colorado, Kentucky, Oregon etc.)

## 2018 Farm bill

federally legalized hemp production with less than 0.3% THC, allowing states to regulate.

## As of today,

**47 of 50** states have passed legislation legalizing the cultivation of CBD Hemp, and it will most likely be all 50 by the end of the year.



# 3 Types of Cannabis

## Cannabis Sativa



Taller, thinner leaves, wider node spacing to handle heat-humidity.

## Cannabis Indicus

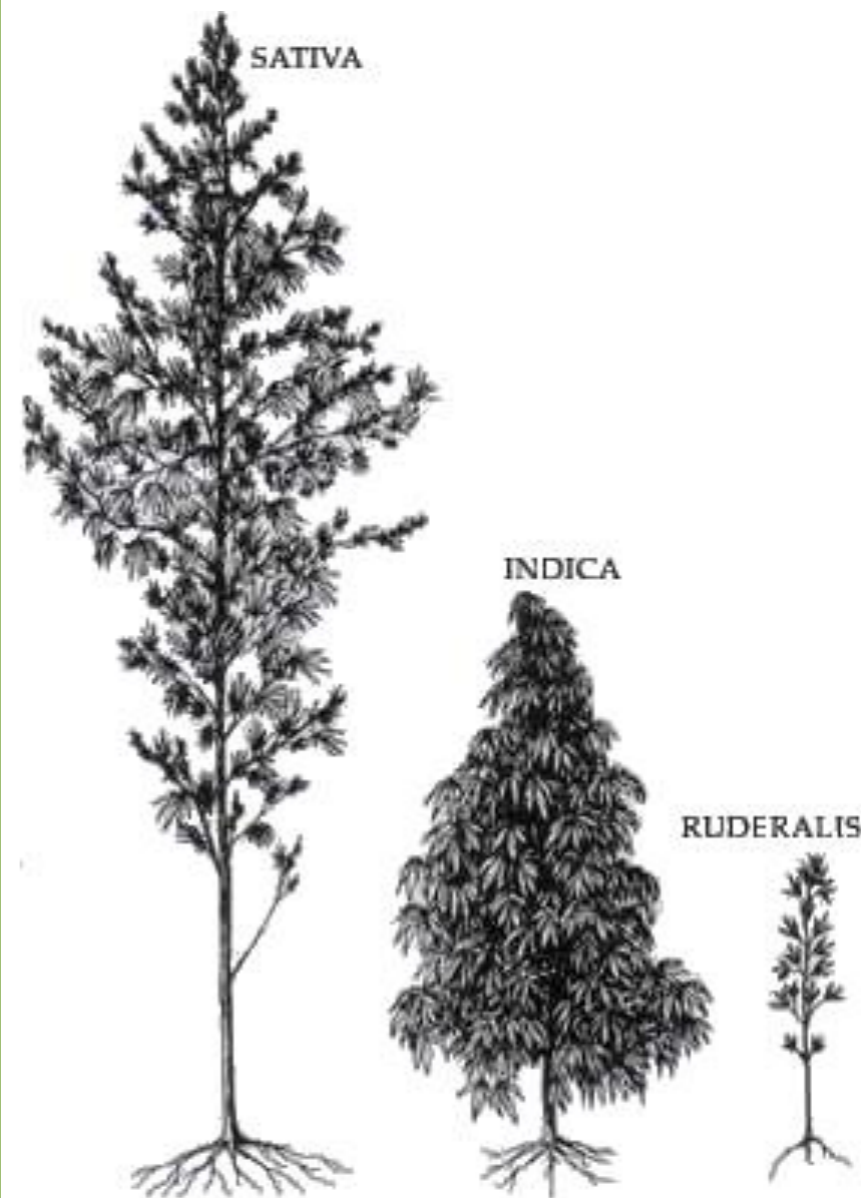


Shorter, bushier, and broad leaves capable of producing heavy biomass.

## Cannabis Ruderalis



Native to Eastern Europe/Asia, typically compact and is not daylight sensitive.



# 3 Types of Hemp Production

**Fiber production**



**Seed production**



**Flower/Cannabinoid production (CBD)**





# H.B. 213

## Georgia Hemp Farming Act

### ■ GA hemp rules and regs:

- You must be engaged in the Ag industry generating at least \$5000/year of revenue.
- You must have a contract with a Georgia processor.
- Your premise will be geolocated, available for inspection at request, and signage displayed if within sight of a road.
- If your crop tests above 0.33% THC (eventually above 0.3%) it will be destroyed.
- If this occurs, the processor will be responsible for 50% of your input costs.
- <http://agr.georgia.gov/hemp/Georgia-Hemp-Plan.pdf>

# Processor-Grower Relationship

- You use our Genetics
- Follow our Standard Operating Procedures (SOPs)
- Produce a minimum level of production, and we contract to buy your biomass at a set price.
- We handle marketing, you grow the crop.



# Standard Operating Procedures

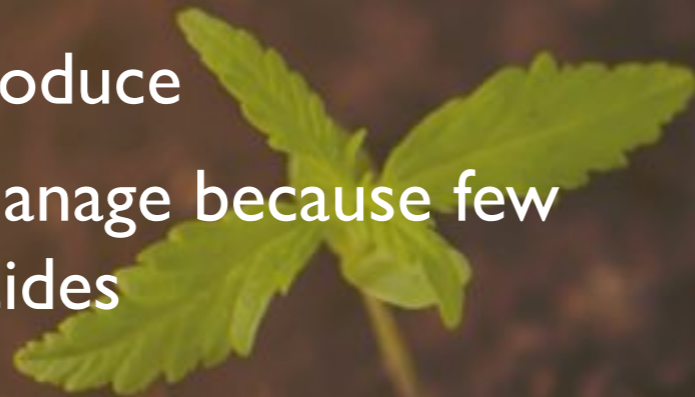
- Soil test (standard and heavy metals)
- Choose site wisely (well drained, productive)
- Plant on time (May 15-July 15)
- Dial in fertility
- Get and stay ahead of weeds
- Follow irrigation protocols
- Scout for pests and plant health weekly
- Test on time, harvest on time
- Manage post harvest handling and drying efficiently





# Challenges of Hemp Production

- Management and labor-intensive throughout season
- Expensive to produce
- Pests hard to manage because few approved pesticides
- “New” crop



# Fertility



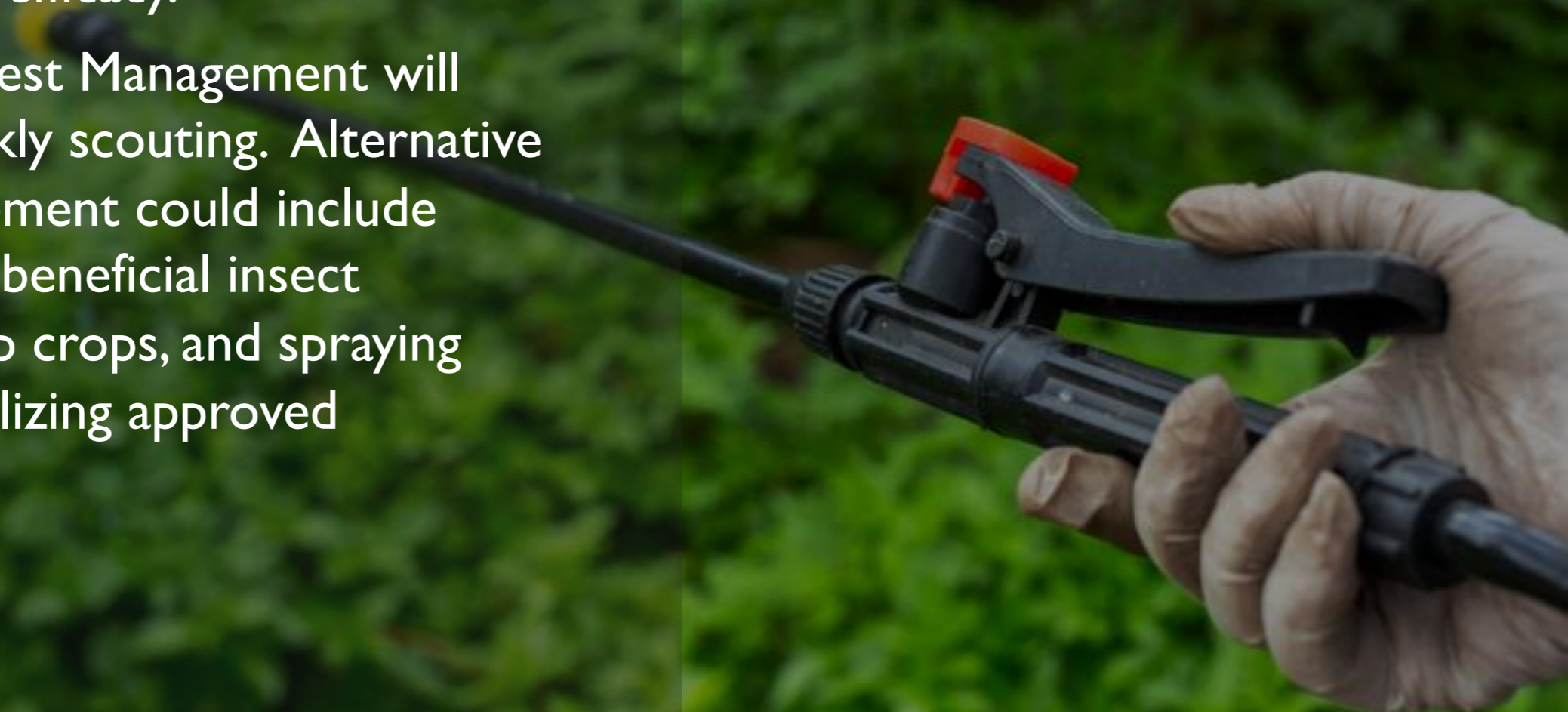
- 100-150lbs N per acre (2.5 tons chicken litter)
- If fertigating, cut back on N and need more K closer to harvest
- Irrigation – prefers it on the drier side of things



# Pesticides



- Currently less than 26 approved Pesticides, most biological based and with limited efficacy.
- Integrated Pest Management will include weekly scouting. Alternative pest management could include sticky traps, beneficial insect releases, trap crops, and spraying regimens utilizing approved chemistries.



# Genetics are Critical



- Longer bud structure and node spacing
- Minimal leaf to cola ratios to combat mold
- Medium to High resistance to common pests
- Strong plant uniformity for easier field maintenance
- Medium to Large stretch which ensures higher airflow within fields. (Avg. of 5-6 ft Tall)
- Strong ratios of CBD to THC to ensure safe crop



A photograph of a cannabis cultivation tray containing several young clones in green net pots. The plants are green with serrated leaves. In the background, there are some brown, round objects, possibly seeds or buds.

## Clones

VS

## Seeds

### Clones

- Genetically identical to parent
- No males
- No germination concerns
- **More expensive**
- **No tap root**

### Feminized seeds

- Less Expensive
- Tap root
- **More variation**
- **Germination rate**
- **Feminization rate**



**Rooted Cuttings in  
72 count trays**

**Plants grown in  
greenhouse and  
hardened before  
delivery**

Plants transplanted  
and watered in

4 row planter should  
plant 15-20 acres/day



**Soil structure must be properly prepared and weed management addressed with pre-plant tillage.**







**Weed  
management  
through  
cultivation is  
critical!**



# Granville Cultivation Tool

**01**

Different cultivation tools will work

**02**

4-row cultivator should cover 25-30 acres/day

**03**

Plan on cultivating weekly for first 4-6 weeks

**Athens, TN,  
grow utilizing  
the tobacco  
model**

**Fields that fell  
behind on  
cultivation  
had to be  
hand weeded.**

Average about 1200-1500 lbs./acre biomass

Full season plants average over 10% CBD





Granville Hemp  
Harvester based on  
their Tobacco  
model

2 row unit will  
cover 6-8 acres/day



**Stripper head gathers biomass and chops into 14” pieces**






**Standard Tobacco processing infrastructure can be easily modified to handle hemp.**

**Biomass must be processed timely to ensure plant doesn't go through a heat prior to drying.**





**In TN last year,  
we loaded  
about 1000lbs  
wet  
biomass/42”  
box and loaded  
9 boxes/barn.**



**Barns  
cycles  
lasted 3-4  
days from  
load in to  
reload.**

## **Future of CBD Hemp?**

- FDA clears way for demand.
- Delta 9 testing protocol becomes standard.
- Low cost production is the future. We think the future is bright for GA Hemp.



# SCA Farm Services

[dan@secondcenturyag.com](mailto:dan@secondcenturyag.com)  
(229)457-1136

[will@secondcenturyag.com](mailto:will@secondcenturyag.com)  
(404)502-0880

[jim@secondcenturyag.com](mailto:jim@secondcenturyag.com)  
(229)456-0708

[www.secondcenturyag.com](http://www.secondcenturyag.com)