

Industrial Hemp: The Processing Market

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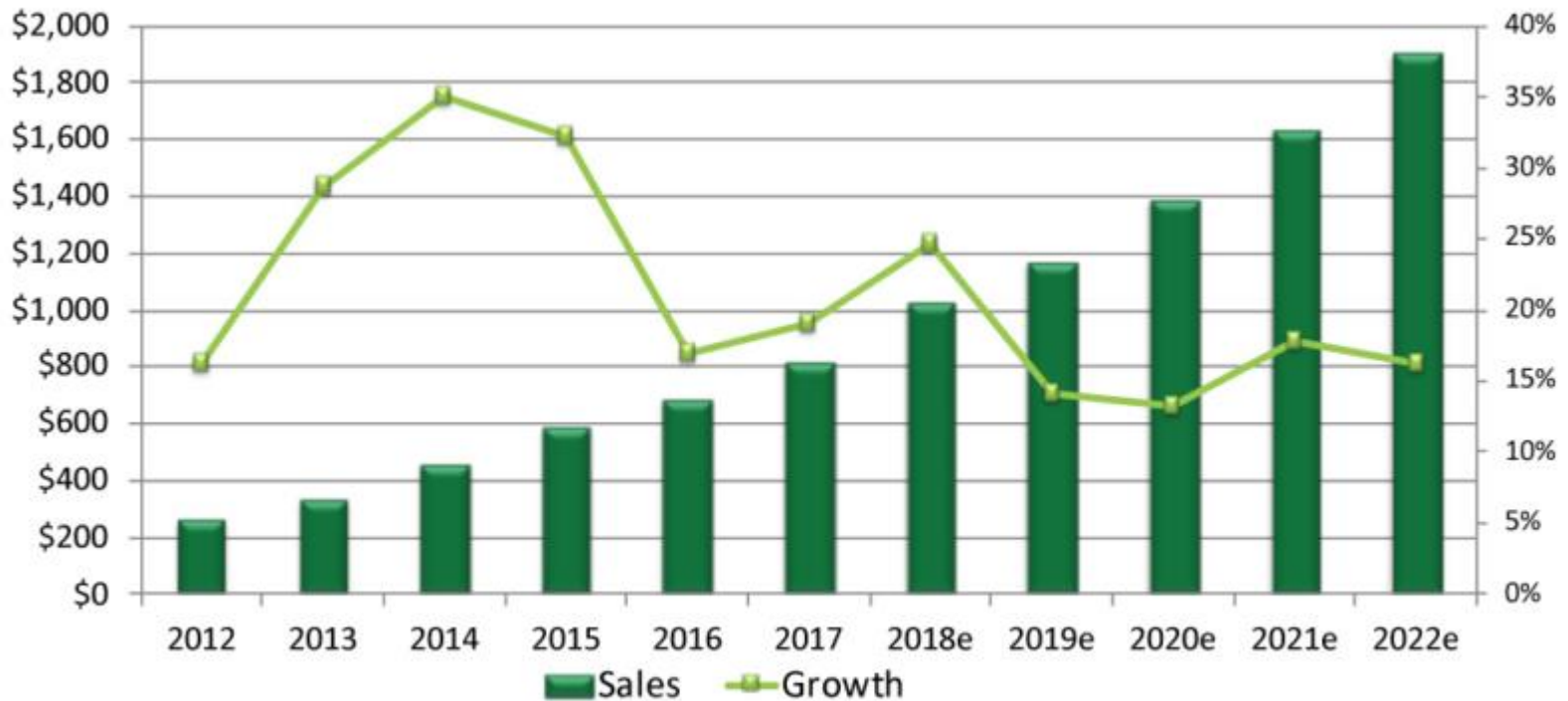
Outline

- Growing Market but to what extent?
- Processing In NC, KY
- Processing TN
- What to consider in marketing

Vital Considerations

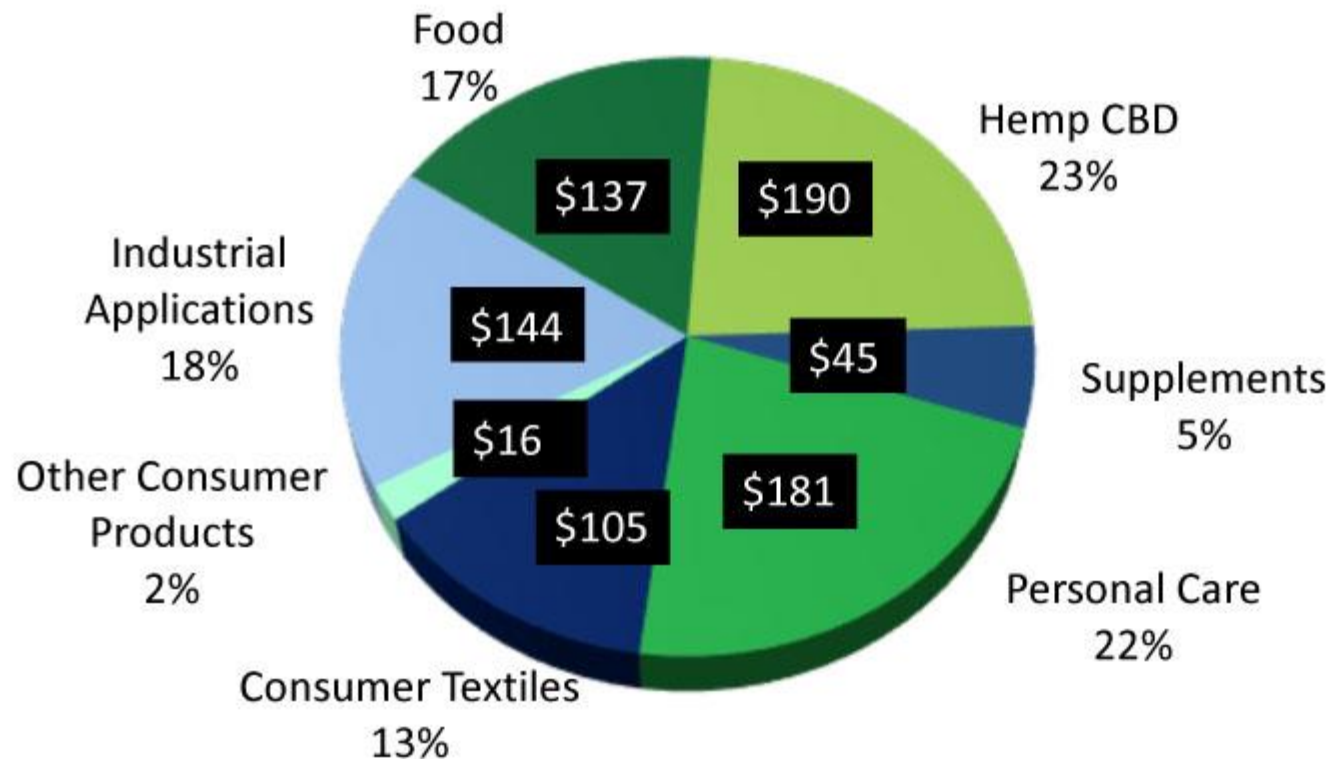
- Processors are the key link to the consumer market.
- Industrial hemp: the new soybean or the new Emu?
 - Substantial growth and real market (so not Emu)
 - Projected growth a reach?
 - \$22B CBD market by 2022 (source: Brightfield Group LLC)
 - Need to be a little skeptical (Maybe not next soybean?!))
 - Who knows?

U.S. Hemp-Based Products Sales, 2012-2022e



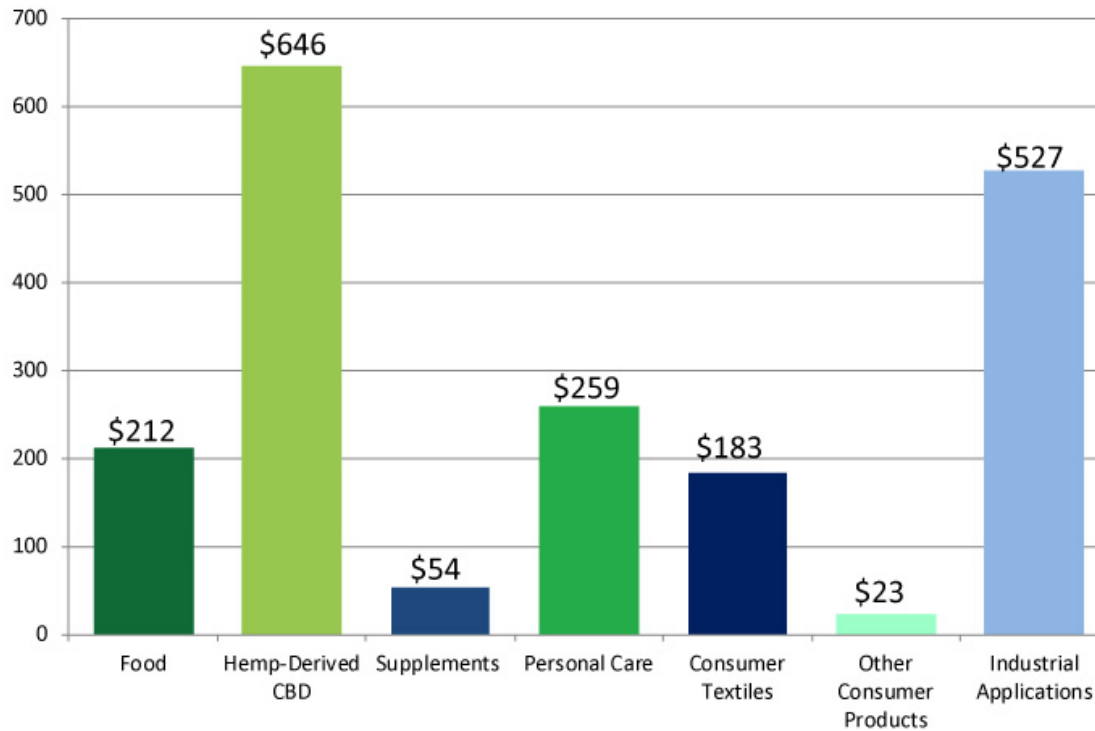
Source: *Hemp Business Journal* estimates (\$ mil., consumer sales)

\$820 Million U.S. Hemp-Based Product Sales by Category in 2017



Source: *Hemp Business Journal* estimates (\$mil., consumer sales)

\$1.9 Billion U.S. Hemp-Based Product Sales by Category in 2022e



Source: *Hemp Business Journal* estimates (\$ mil., consumer sales)

2017 Kentucky Processors

- 49 Approved (9 in 2014; 72 in Sept 2018)
- \$7.5 Million Paid to Kentucky Growers
- \$25.6 Million Capital Investments
- 81 Full-time Jobs Created
- \$16.7 Million Gross Product Sales

Location of Kentucky Processors



2018 Kentucky Industrial Hemp Research Pilot Program



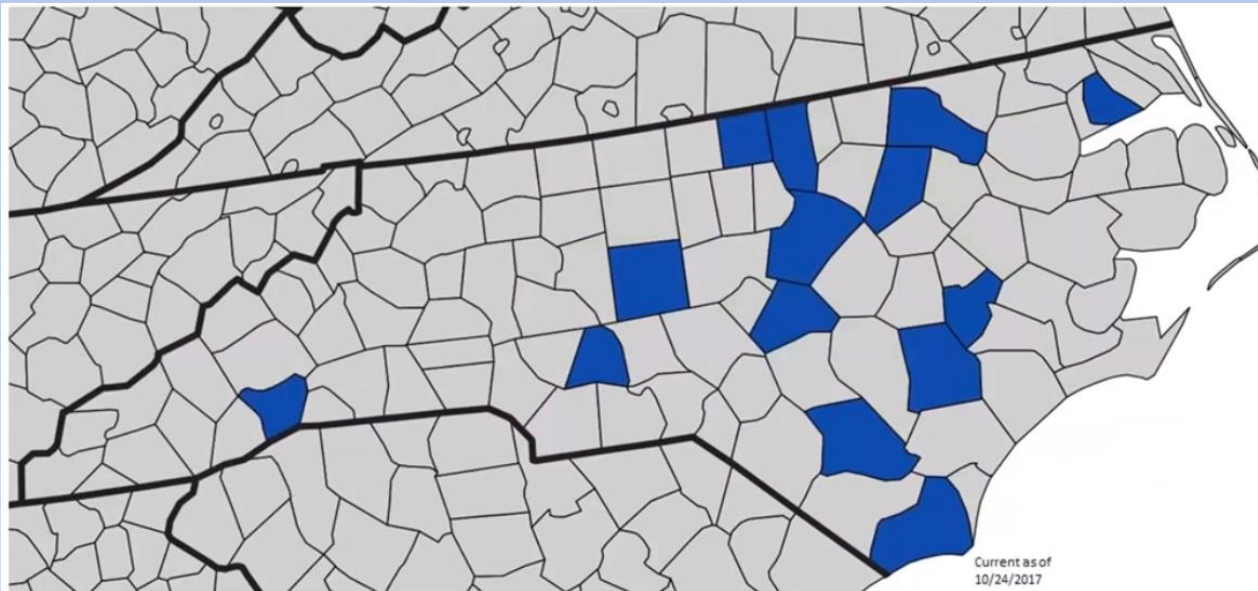
WWW.KYAGR.COM/HEMP

Preliminary Kentucky Production 2017

Category	Grain	Fiber	Floral
Growers	20	14	112
Acres Planted	1,227	159	1,883
Acres Harvested	826	120	1,371
Average Yield (Pounds/acre) ¹	518	2,556	1,024
Average Price Per Pound	\$1.70	\$0.34	\$7.20

¹ Acres with yield above zero; dual purpose grain and floral excluded

NC Registered Hemp Processors and Laboratories (10/24/17)



Source: Emily Febles, NC Industrial Hemp Commission, NC State Extension Webinar,

Example of North Carolina Facility

- Criticality: 2018 Dec launch, Korent product line, full-spectrum CBD oil drops
- Joint venture with Pyxus International Inc.
- 9 workers in December 2018
- 55,000-square foot facility, forecasting 88 jobs

Processing in Tennessee

- Currently we find a lack of processing in the state
- Contacted all 125 individuals listed by Tennessee Depart of Agriculture as having a processing license
- 34 responses so far:
 - 8 have indicated that the are currently accepting industrial hemp for processing
 - None are very large operations
 - Several are in the process of setting up a processing facility
 - Mostly interested in processing for CBD oil

Kentucky Processing 2018

- KY Department of Agriculture October 18
- 2014 Farm Bill: “agricultural pilot program” means a pilot program to study the growth, cultivation, or marketing of industrial hemp

Marketing and Starting

- What is step 1? Involves numerous factors but your market is one of the key elements
- What is step 3? Find a buyer or processor!

**I want to grow hemp.
Where do I start?**

Logical Steps to Enter the Industry

- Determine what type of hemp you want to grow; what fits your farm operation: Grain, Fiber, CBD
- Apply for and obtain a hemp Grower License from Kentucky Department of Agriculture
- Find a buyer/processor for your intended harvest. As a starting point, the 2018 Processor/Handler List is found on the KDA website.
- Locate and obtain legal industrial hemp seeds or transplants (processor will typically dictate what strain you plant)
- Research proper crop production techniques before planting the crop

 
Kentucky Department of Agriculture

Working with Processor or Buyer

- Start conversion with processor or buyer right away
- Have a contract
- Go over the contract with a lawyer
- Make sure you can meet the required specifications on in the contract
- Critically evaluate incentives

Working with Processor or Buyer

- Don't bet the farm on your operation
 - Best to start small
- If the markets get saturated prices could drop quickly
- Farmer loses everything if the THC of their plant goes higher than 0.3% at anytime (10 in NC last year)

Price: Highly Variable, Quality is Very Important

- \$2-\$7 per CBD %
 - 1000 lbs. of biomass (dried and stemless), with a CBD percentage of 10% and the highest quality cannabinoid spectrum with no contamination-impurities
 - Per acre gross **\$70,000**: [(\$7) x (10% CBD) x (1000 lbs. biomass)]
 - 5% CBD and lowest quality
 - Per acre gross **\$10,000**: [(\$2) x (5% CBD) x (1000 lbs. biomass)]
- <https://catawba.ces.ncsu.edu/2018/11/hemp-production-market-opportunities-and-risks/>

Do You Due Diligence

- The below is always important but especially so for a new industry
- Find out as much as you can about the principal owners-managers of the operation
 - Years in operation
 - Industry experience
 - Background check

More on Due Diligence

- Just because the processor is working with local officials doesn't mean it is a go!
- The economic development landscape is littered with “groundbreaking failures”
 - Financing can fall through
 - May have been a scam the whole time
 - People are pros at seeking out desperate communities

Cautionary Story: Paducah KY Facility

- HMI Group of Beijing and Kings Royal Biotech announces new hemp processing facility promising 271 jobs posted February 13, 2018
- July 19, 2018, announced plant will not be built
- Could not find further financing and has run out of \$
- Contracted with Kentucky farmers to raise 2,300 acres of hemp for CBD production
- There was no immediate word whether those farmers would be paid.

Access to North Carolina Processors

- NC State Extension Website
- Hemp Connections
- Free terse, “advertisement”
- Processors posting for hemp (example)
 - DATE Looking for purchasers of up to 30 acres of Hemp biomass for CBD grown in 2019 Contact
- <https://industrialhemp.ces.ncsu.edu/hemp-connections/>

Resources

- North Carolina State Extension webinar and webpage:
 - https://www.youtube.com/watch?v=2Xj_LaUa4Ac&t=1222s
 - <https://industrialhemp.ces.ncsu.edu/>

Questions, Comments,
Thank You!

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