

2021 Hemp Market Outlook

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May 6, 2021



Agenda

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Speaker Background

- **Background in physical commodities**
 - Production Ag background in West Texas
 - Cattle Empire- Risk Manager and Merchandiser
 - INTL FCSTONE (STONEX)- Risk Management Consultant (broker)
 - JBS SA- Domestic/Export Trader & Feed Mill Manager



Strengthening underlying markets to build robust derivative markets

PanXchange: At a Glance

- **PanXchange is a market structure solution firm.**
 - Founded in 2011
 - Headquartered in Denver, Colorado
 - Live markets: East Africa Agriculture Products, Upstream Oil and Gas, US Industrial Hemp
- **We bring years of commodity experience to developing and nascent markets to enhance transparency, industry development, and supply chain efficiency.**



PanXchange: US Industrial Hemp

- **Market Analysis:**
 - **Spot Price Indices**
 - Biomass: Colorado, Oregon, Kentucky, Northeast Region, Great Plains Region
 - Refined Products: Winterized Crude Oil, Full Spectrum Distillate, Broad Spectrum Distillate, CBD Isolate
 - Industrial: True Hemp, Hurds, Grain, Semi-processed fibers
 - **Objective Industry Analysis**
 - Domestic and International Legislation
 - Proprietary and Public Data
 - Emerging market trends and opportunities
 - Cannabinoid and Industrial markets
- **Trading Platform:**
 - Aggregates vetted firms in one central location
 - Provides reliable spot pricing data
 - Market Standardization



Macro Trends for Hemp

- **COVID19 Recovery**
 - Brick & mortar
 - Economic recovery
- **Demand for Sustainability**
 - Biodegradable plastics
 - Reduced environmental footprint
 - Carbon management
 - Circular economies
- **Marijuana Legalization**
 - Inevitable?
 - Effects of cannabis & cannabinoid regulation?



Industrial Applications - Hot Topics

- **Sustainability Demand**
 - Reduced carbon footprint
 - Reducing emissions
 - Incentivising sequestration
 - Bioplastics
 - Less impactful products
 - hemp paper/textiles
- **Repatriating American Hemp**
 - Small and large firms alike working to develop US infrastructure
 - Still many years to go, but we are closer than you would think for some sectors to grow significantly



Industrial Applications - Market Developments

- **General shift in attention towards industrial**
 - CBD demand requires less than 5000 acres!!!
 - CBD prices unattractive
 - Volume trade for industrial hemp feedstocks increasing
 - Hurd for plastics, bedding, building materials, absorbents
 - Short fiber for plastics
 - Fiber for paper/pulp
- Long fiber & Grain still in innovation phase
 - Long fiber still project based, but people are close to producing scaleable feedstocks
 - Grain limited to food and niche applications until regulations and economics develop



Industrial Applications- Potential Opportunities

- **Industrial Growers Must be Risk Averse**
 - Consider opportunity costs
 - Negotiate sales before committing to grow
 - Biggest complaint from industrial processors is they cannot find steady supply
- **Carbon Credits**
 - A fiber purposed hemp crop can sequester 11,000 lbs of carbon
 - When not if



Industrial Applications- Projections

- **2021 will be the year of transition to industrial**
 - Industrial acres will surpass Cannabinoid in 2021
 - Biggest challenge for processors is finding steady supply
 - Imports will stay strong but decline as US develops
- **A demand driving sector(s) will emerge**
 - Paper, plastics, textiles, building materials?
 - Will be necessary for other applications like feed to price in



Cannabinoid Applications - Hot Topics

- **Delta 8**
 - Potentially largest source of demand over past 6 months
 - Safety concerns
 - Will the Feds step in?
 - Potential repercussions
- **HEMP act**
 - Will 1% really help farmers
 - Benefits for R&D grows
- **Hemp Banking**
- **Marijuana Legalization**
 - Friend or foe for hemp?
 - Comes down to how regulatory administration is structured. Combined or separate regulations for cannabis as a whole.



Cannabinoid Applications- Market Developments

- **Oversupply still prevalent**
 - Liquidated products still suppressing regions like CO, OR, KY.
 - 150 million pounds of excess biomass from 2019 alone, and 53 million from 2020.
 - Wide variance in quality (processors are skeptical)
- **Delta 8 has flushed significant volumes of material**
 - Is it enough? Per numbers above, the market would need to absorb over 1 million KG of Delta 8
 - The caveat is the true oversupply of VIABLE material.
 - Will the federal government hamper Delta 8? Probably.
- **Exports**
 - EU demand rising, but true data hard to grasp with current export codes.
- **2021 Planted Acres**
 - US demand only requires 1650-3200 acres total with current yields and processor efficiencies.
 - Cut that in half if the THC cap is raised to 1%.
- **Prices**
 - Still meandering at the current low range.
 - Biomass: \$0.05-\$0.30 per point.
 - Premiums starting to emerge regionally for quality material as buyers sift through supplies.
 - Specifically outside of CO, OR, & KY.

Cannabinoid Applications- Potential Opportunities

- **CBD specific**
 - Limited would be optimistic
 - Must be risk averse. Only plant if sales are arranged, or have an equally sufficient outlet.
- **Minor Cannabinoids**
 - CBG, CBN and other minors are still demanding premiums.
 - Acreage demand is small
 - Heavily encourage sales to be arranged before committing production.
- **Delta 8**
 - Very risky to say the least.
 - If pursued, pursue it ethically.



Cannabinoid Applications - Projections

- **Prices will recover, but....**
 - Prices will make a modest recovery prior to harvest as buyers search for viable material
 - Too much general interest in hemp to believe acres suggest rationing demand
 - Buyers will play hand to mouth and bide time till harvest
- **Delta 8 will face face tighter restrictions**
 - States will continue to crack down on Delta 8
 - A federal agency might crack down as well.
 - Major legislation unlikely as legalization/decriminalization remains a hot topic in Congress
- **Strong exports will continue**

Supplemental Opportunities

- **Carbon Credits**
 - Rapidly emerging
 - Large demand from companies wanting to improve ESG scorecard
 - Costs and availability to grower will become more accessible
 - Do homework before choosing. Make sure credits are marketable.
- **Find a niche and focus on your strengths**
 - The healthiest survivors of the price crash have been the entities that focussed on strengths and efficiency



Planting Decisions

- **Be risk averse**
 - Plant only if you have sales negotiated with a reputable buyer
 - Weigh against alternatives if able. Principal crops are at the highest level since the ethanol boom.
- **Know your region**
 - Hemp is a very regional market, especially for industrial applications
 - Weigh your closest and best options and tailor your crop accordingly
- **Know your buyers specs and beat them**



Conclusion & Closing Notes

- 2021 will be the year of transition to industrial applications.
- Cannabinoid prices are due to recover with Delta 8 volumes that are moving.
- Planted acres will determine the extent of rallies.
- Carbon credits are coming. Expect many more sustainability programs to follow.
- Weigh hemp planting decisions conservatively.



Q&A

LET'S TALK

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Thank you!

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05/06/2021



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