

## Potential Economic Impact of Industrial Hemp

Please note that although statistics for Kentucky's market potential have yet to be calculated or published, one can assume Kentucky's potential based on estimates found for the United States hemp market.

### The United States Hemp Market

- In general, United States hemp imports have grown in percentage terms over the last few years. In 1997, the United States imported a total of \$2.9 million in hemp products, including woven fabrics made of hemp (\$1.29 mil); raw or processed hemp (\$100,000); and yarn (\$25,000). This estimate does not include consumer-ready goods.
- The Congressional Research Service, CRS, reports that there is no official estimate of the value of United States sales of hemp-based products; although industry representatives claim that retail sales in North America exceed \$400 million annually.
- A market for industrial hemp exists in a number of specialty or niche markets in the United States, including specialty papers, animal bedding and foods and oils made from hemp. There is potential for additional markets to emerge in the areas of automobile parts, replacements for fiberglass, upholstery, and carpets.

The United States lacks current production cost data and a commercial hemp processing market. The lack of processing facilities and other infrastructure necessary for a viable commercial hemp market in the United States makes demand and profit projections extremely speculative. It is the combination of projected hemp demand uncertainty, coupled with a low volume market, that makes hemp prices volatile and profit estimations adventurous.

### United States Fiber Market Potential

- It is estimated that hemp fiber yields 800 to 2,320 pounds of fiber per acre. Assuming a potential U.S. yield of 1,550 pounds of fiber per acre, the total import quantity of hemp fiber, yarn, and fabric in 1999 could have been produced on less than 2,000 acres of land.
- Given the average size of farms in the United States (near 500 acres), just a few farms could have supplied the hemp fiber equivalent of 1999 import levels.
- Similarly, world hemp fiber exports have fallen from more than \$12 million in the early 1960s to currently less than \$5 million.

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### United States Seed Market Potential

- Seed processing firms in the United States and Canada were asked how many tons they purchased per month. They estimated North American demand at 1,300 tons at an average price of 39 cents per pound. It would take 2,600 acres to satisfy the estimated demand for hemp seed.

### **Production in Other Countries**

- Low-cost producers such as China, South Korea and the Former Soviet Union produce about 70 percent of world supply.
- Although the hemp industry is subsidized in the European Union, production there remains negligible. Other countries provide production and marketing subsidies for their hemp farmers. For example, in 1998, the European Union provided production subsidies equivalent to about \$222 per acre, costing the EU over \$30 million.
- Since 2009, seeded acres in Canada have increased consistently and stood at almost 40,000 acres in 2011.

### **Job Creation**

In 1998, **The Kentucky Hemp Museum and Library** contracted with the University of Kentucky Center for Business and Economic Research to conduct an analysis of the potential economic impact of industrial hemp in Kentucky. Among the key findings of the *Economic Impact of Industrial Hemp in Kentucky* by Thompson, Berger and Allen are:

- If Kentucky were to capture the majority of the market share for certified industrial hemp seed in the United States, the potential economic impact is estimated at 69 fulltime jobs and \$1,300,000 in worker earnings.
- The total economic impact in Kentucky, assuming one industrial hemp processing facility located in Kentucky and sold certified seed to other growers, would be 303 full-time equivalent jobs and \$6,700,000 in worker earnings.

### **Hurdles Kentucky would have to overcome in order to become a main US supplier of industrial hemp:**

#### **Production based on contract**

Generally, based on research, hemp production is based on a contracted production system.

#### **Competition**

Competition from other hemp producers is very strong, where labor costs are much lower than the United States. China continues to dominate both world hemp fiber and hemp seed production. Through a complicated system of commodity price supports, the Chinese government can dramatically alter the amount of hemp grown by changing relative price subsidies.

#### **Technology and Infrastructure**

Although hemp processing technology remains antiquated, new innovative fiber separation techniques are being tested, particularly in western Europe. The lack of processing facilities and other infrastructure necessary for a viable commercial hemp market in the US makes demand and profit projections extremely speculative.

The silence of the large paper, textile, and oil manufacturers is notable. Multinational companies are not confined to the United States for investment opportunities and have the capacity to invest in production and processing facilities all around the world. Corporate America has access to plenty of raw material and low labor costs (China and Eastern Europe).