

Industrial Hemp: Global Markets and Prices

Abstract

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There continues to be considerable discussion regarding the viability of industrial hemp as a supplemental production alternative. Many assume that both the economic (lack of sustained profitability) and the political environment will effectively frustrate renewed hemp production in the US. Others believe that the industrial hemp industry can be revitalized in the US. It is not the author's intent to project normative comments, but to provide factual market intelligence.

Industrial hemp can be grown with little or none of the psychoactive properties of marijuana by utilizing low-THC varieties. However, most seedstock in the world has been bred for European and Asian production. The development of a US-based industrial hemp seedstock industry may improve yields (if varieties were engineered for North American production) and lower seed costs. However, this is not guaranteed. Agronomically, hemp can easily be grown around the world and competitive advantage may depend more on local processing capacity.

Many have argued the merits of hemp fiber and oil -- superior fiber length and strength, excellent oil quality for both industrial and feed uses, and a myriad of other applications. Importantly, processing remains relatively expensive as compared to other alternatives and processing technology remains antiquated. However, new innovative fiber separation techniques are being tested, particularly in western Europe.

Despite these claims, world production has steadily fallen, dramatically since the early

1980s, and is dominated by many low-cost producers. Hemp fiber production is only one-fourth the volume of the early 1960s (India, China and the Former Soviet Union produce about 70% of world supply) and hempseed production has fallen by half during this time period (China alone produces 70% of world supply). Although the hemp industry is subsidized in the European Union, production there remains negligible. Similarly, world hemp fiber exports have fallen from more than \$14 mil in the early 1960s to currently less than \$5 mil.

Declines in production may be signaling that hemp profits are also on the decline -- either absolutely and/or relative to other production alternatives. Industrial hemp faces significant competition from other natural fibers (cotton comprises 98% of the natural cellulose textile fiber market), oils (particularly soy) and a multitude of synthetics. Specialty pulp fibers are limited to less than 5% of normal demand of other major grades of paper.

In 1996, the US imported \$1.4 mil of hemp and hemp products. Of that amount, nearly all (\$1.3 mil) was value-added hemp goods (woven fabrics and yarn). The domestic import market for fiber hemp is relatively small (\$101,000) given the lack of processing facilities and other infrastructure required. Thus, without a viable processing industry, US demand and profit projections for US-grown hemp are extremely speculative. If production was legalized, farmers would be limited to selling bulk production until (and if) a US hemp processing industry was established and growers would primarily be bulk suppliers for the export market, at least in the short-run.

World prices are highly variable and might not provide a realistic picture if production was legalized in the United States, given the sensitivity of prices to changes in production levels. When world hempseed production surged in the 1980s, prices fell below the break-even price required for production (as estimated from Canadian research). US hemp fiber import prices averaged \$4.26/kg in 1995 (which includes some processing which would reduce farm-level prices), also well below the break-even price projected by Canadian research. If the profit margin collapses, or remains risky, alternative crops are increasingly attractive.

While current projected break-even prices for hemp fiber and seed production appear to lie below world prices, US farmers would compete, at least initially, with low-cost producers (India, China and the FSU) and subsidized production from the EU, in supplying raw product to the world market. The European Union continues to subsidize industrial hemp at the rate of \$100/ton (approximately half the market price). Despite these subsidies, hemp production in France (which has always been legal) has not grown in recent years, and newly legalized production in the Netherlands, England and Germany remains negligible. Canada and Australia have both recently authorized limited commercial hemp production. It is not reasonable to believe that the US would subsidize hemp production.

Further, many of the multinationals purportedly interested in hemp production (Weyerhaeuser, Masonite, International Paper and Inland Container Corporation) are not confined to the US for investment opportunities.

Industrial hemp production has remained legal throughout most of the world and the private sector has been free to invest in production research and processing facilities.

Multinationals have the capacity to invest in production and processing facilities all around the world. Non-existent US industrial hemp production does not impede their investment elsewhere. It is notable that foreign investment in hemp processing facilities in India, China and the FSU has been small. It is logical to assume

that these decisions were based on prudent business sense.

If industrial hemp production was permitted in the US, it is reasonable to assume that production would be relatively low in early years (the EU experience bears this out). Commodity prices can be more volatile in thin (low volume) markets, creating more market risk than US farmers might be willing to bear. Contract production would alleviate some of that risk. Any price, thus profit projections, for industrial hemp production must take into account the effect of changes in both production and demand on world price.

This publication has not been reviewed by an official departmental committee. The ideas presented and the positions taken are solely those of the author and do not represent the official position of the Agricultural Economics Department, College of Agriculture or The University of Kentucky. Questions should be directed to the author(s).

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