

Developing Redcedar Essential Oil Market in Minnesota: Economic Opportunity for Rural Development?

- 1) This article examines the current market for Eastern Redcedar products, the availability of raw material in Minnesota, and the viability of developing industry based on Eastern Redcedar essential oil extraction.
- 2) Nationwide the market for Eastern Redcedar products is, quote - \$60 million dollars in annual sales – unquote. This includes primary products such as dimensional lumber and cedar paneling as well as secondary products like mulch and essential oils.
- 3) Most jurisdictions classify Eastern Redcedar trees as a weed. Some go so far as to list it as an invasive species. Due to their broad climate tolerance and relatively quick growth, the Eastern Redcedar can be found covering much of the Eastern and Central United States.
- 4) Eastern Redcedar can reach sexual maturity in ten years and grow to be, quote – 60 feet in 50 years – unquote.
- 5) Missouri, Tennessee, Kentucky, and Arkansas are collectively home to more than 50 percent of the U.S. standing supply of Eastern Redcedar.
- 6) While not a top producer, Minnesota has 324,400 cords of Eastern Redcedar currently standing, representing 1 percent of the national supply.
- 7) Essential oils are, quote – the concentrated aromatic compounds produced from ... a wide range of plant species – unquote. They are used in the food, beverage, cosmetic, and cleaning industries.
- 8) Essential oils are present in small quantities in their natural state but can demand relatively high prices do to their essential nature in long established product recipes.
- 9) Redcedar oil, also known as Virginia Cedarwood oil, quote – is recovered by several methods, such as steam distillation, continuous partial pressure, solvent extraction and super critical extraction – unquote.
- 10) Most Redcedar oil is currently produced from the lower value or waste portions of the tree, such as, quote – sawdust, waste shavings, old stumps, and chipped logs – unquote.
- 11) According to Klein, quote – the oil yield from eastern redcedar wood ranges from 1 to 3.5 percent, depending on the ratio of the heartwood to sapwood – unquote.
- 12) In one trial, a 20 hour steam distillation was able to yield 3.18 percent while a 6 hour hexane extraction yielded 4.01 percent for the same sample.
- 13) The market for most essential oils is dominated by a few large producers who have the ability to strongly influence the price. As of the publishing of the article, Virginia Cedar oil was selling for, quote – about \$20 for 16 oz – unquote. Which was down \$7 in two years.
- 14) The author suggests that entering the Redcedar oil market in a significant way would require a sizeable investment on the order of \$1 million - \$2 million for a large-scale distillation plant. At this scale, viability would require processing, quote – 50 tons of raw material a day – unquote, not a supply that is likely to be available in Minnesota.
- 15) The author goes on to suggest that a garage-scale entrepreneur might be viable especially if they were set up to work with or sell complimentary Eastern Redcedar products.
- 16) Overall, the author recognizes the value of Redcedar oil and the potential to create a viable business using the lumber industry's waste stream as the raw material, be he cautions that Minnesota may not be the most advantageous location for such an endeavor.

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