

# Minnesota Elderberry Cooperative

## Feasibility Study

Assessing Market Opportunities and Commercial Applications

September, 2013



## About this Feasibility Study

### Minnesota Elderberry Cooperative

<http://www.minnesota-elderberry.coop/>

The Minnesota Elderberry Cooperative (MEC) was formed in 2012 to be the vehicle by which small farmers could work together to determine the feasibility of wide-scale production of elderberries in the state and region, for subsequent cooperative processing and marketing of value-added juices, wines and concentrates.

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Since 1985, Cooperative Development Services has helped existing cooperatives retain their vitality and plan for future growth opportunities. CDS also actively engages with new cooperatives and organizations operating in a cooperative manner to launch new business ventures and plan for long-term viability.

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## Executive Summary

Interest in cultivated elderberry production in the United States is being driven by consumer demand for health, nutrition, and wellness products. Elderberries are being utilized in a variety of food and beverage items as a stand-alone product or as an ingredient to boost the health/nutrition of other food/beverage items. Elderberries are also being utilized for nutraceutical purposes as well as for natural dye applications.

With European production currently dominating the market (approximately 30,000 acres), US producers are attempting to jumpstart a domestic industry that will grow from a very small base of approximately 420 acres. The Minnesota Elderberry Cooperative (MEC) was formed in 2012 to be the vehicle by which small farmers could work together to determine the feasibility of wide-scale production of elderberries in the state and region, for subsequent cooperative processing and marketing of value-added juices, wines and concentrates.

Commercial cultivation of elderberry in Minnesota/Wisconsin is a very recent phenomenon. Most producers have begun planting the crop following attendance at a variety of events featuring Terry Durham of River Hills Harvest in Missouri. From discussions with growers and those interested in growing elderberry, there appears to be no more than 10 acres of known cultivated elderberry (an acre would contain 850 to 1000 plants). All of these acres are in the 0 to 2 year-old category suggesting that the 2013 crop is minimal.

Conversations and surveys with growers confirm that local producers intend to continue increasing acreage in the near term. While future plantings are un-known, it appears realistic to expect incremental growth resulting in approximately 100 acres by 2018. Based upon low yield projections for various ages of plantings, the harvested yield will grow from slightly more than 9,000 pounds in year 2 to more than 200,000 pounds in year 6.

With 95% of worldwide elderberry production focused in a few European countries Minnesota Elderberry Cooperative will face stiff competition on many possible products as these growers

and manufacturers are using economies of scale to their advantage. Price and volume will be nearly impossible platforms to compete upon, so developing innovative, high quality products will be crucial to securing domestic market share. Further, some American consumers place a high price premium on purchasing *local* elderberry products.

The market price for fresh elderberry varies considerably. Producers in Europe are currently paid the equivalent of \$0.20 to \$0.35/pound for un-stemmed *S. nigra*. In the US, however, the most commonly quoted price for fresh, un-stemmed fruit is \$1.00/lb. Currently, most domestic elderberry are acquired by juice manufacturers or wineries; anecdotal reports of fresh elderberry priced at \$4-\$8/pound are possible but unsubstantiated.

De-stemmed domestic elderberry are most often traded at \$2.00/pound, and typically marketed fresh or frozen in 25 pound pails. Like their fresh counterparts, frozen fruit has most frequently been acquired for juice and/or winery applications.

We evaluated a variety of business opportunities/strategies that MEC might consider at this early stage of the elderberry industry in Minnesota and nearby locations. The clearest opportunities appear to be concentrated in two markets: aggregation and sale of fresh and/or frozen berries to the regional winery market; and aggregation and sale of sanitized, frozen berries to River Hills Elderberry Producers.

In September, 2013 an electronic survey was launched to 34 Minnesota Farm Wineries. The survey was designed to assess interest in elderberries as a raw product for wines, as well as to assess winery interest in performing toll processing services. While only 4 wineries completed the survey, their responses were favorable toward expanding their suite of wines to include elderberries if they were available. All the wineries were interested in elderberry as a raw product, preferring fresh berries/juice followed by frozen berries/juice. Wineries were less sure about providing toll processing such as juicing or bottling.

The River Hills Harvest brand, owned by Terry Durham, represents the primary identified market for elderberries. River Hills Harvest is the only identified market offering confirmed pricing for fresh elderberry clusters (\$1/pound) or de-stemmed fresh berries (\$2/pound). Once de-stemmed, sanitized, and frozen in 25# pails, Durham indicates prices can reach \$6/pound or more. The brand adheres to strict on-farm production, harvest, and post-harvest protocols that provide traceability to the producer's farm and/or field. Their post-harvest protocol includes washing berries in a series of sanitizing water baths to achieve US FDA requirements. River Hills processes and markets its' own value added products, and also sells frozen, sanitized berries to ingredient buyers.

The winery industry and River Hills Harvest represent valid, attainable markets for the current and intermediate-term as the elderberry industry grows. We evaluated four possible scenarios for serving these markets:

1. MEC intakes frozen, de-stemmed elderberries from members; inventories them in a central facility; markets frozen fruit to wineries.
2. MEC intakes fresh, refrigerated, un-stemmed elderberries from members; de-stems them; refrigerates them (short duration); markets fresh berries to wineries
3. MEC intakes fresh, refrigerated, un-stemmed elderberries from members; freezes them, de-stems them, inventories them in a central facility; markets frozen fruit to wineries.
4. MEC intakes fresh, refrigerated, un-stemmed elderberries from members; de-stems and sanitizes berries at a MEC facility; freezes/inventories them in a central facility; markets frozen fruit to River Hills.

All options revealed high costs of operation in the initial year of commerce (year 2) when the cooperative processed just under 12,000 pounds of fruit. Costs for all options dropped dramatically in the second year of commerce (year 3) when the cooperative was processing

close to 42,000 pounds of fruit; thereafter costs dropped slightly each consecutive year as the cooperative approached just over 261,000 pounds in year 6.

The two least-cost options involved growers delivering product directly to a commercial cold storage facility (already de-stemmed and frozen in the Grower-Freeze option; fresh on-the-stem in the Blast-Freeze option). The two most costly options involved growers delivering fresh on-the-stem elderberries to a MEC facility for de-stemming prior to delivery to wineries (Fresh option) or to a commercial cold-storage facility (River Hills option).

With a target sales price of \$2/pound, all options cover costs. The River Hills and Fresh options, however, provide little margin in the initial year when production is limited.