

MIDWEST ELDERBERRY COOPERATIVE

Elderberry: Transitioning from Hobby to Commercial Crop

*Growing & Selling Certified Organic
Elderberry & Elderflower Crops*

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22,500 ACRES

- My best 2012 guesstimate for how many acres of commercially planted elderberry the US market can support
- Sustainably grown perennial - permaculture, documented quality (destemmed, sanitized, ripeness, frozen promptly), profitable at retail direct premium pricing
- **Certified Organic** opens up multiple opportunities for ingredient sales into the national / global market



WHY ELDERBERRY?

Native Sambucus nigra canadensis

A marketing perspective answer to a few basic questions:

- If I grow elderberry, will I be able to sell my crop?
- What can elderberries and elderflowers be used to make?
- Are there any unique certified organic challenges?
- Should it be a primary focus or a “Third Crop” for me?
- How the MEC grower cooperative help?
- What are the coop share ownership options?
- How are farmers paid?

POTENTIAL HIGH VALUE

Makes commercially grown native elderberry potentially sustainable environmentally, ethically and economically from Farm to Consumer:

- Local-to-National Food & Drink Processors
- Wholesale Distributors
- Farmers / Ranchers
- Retailers
- Consumers



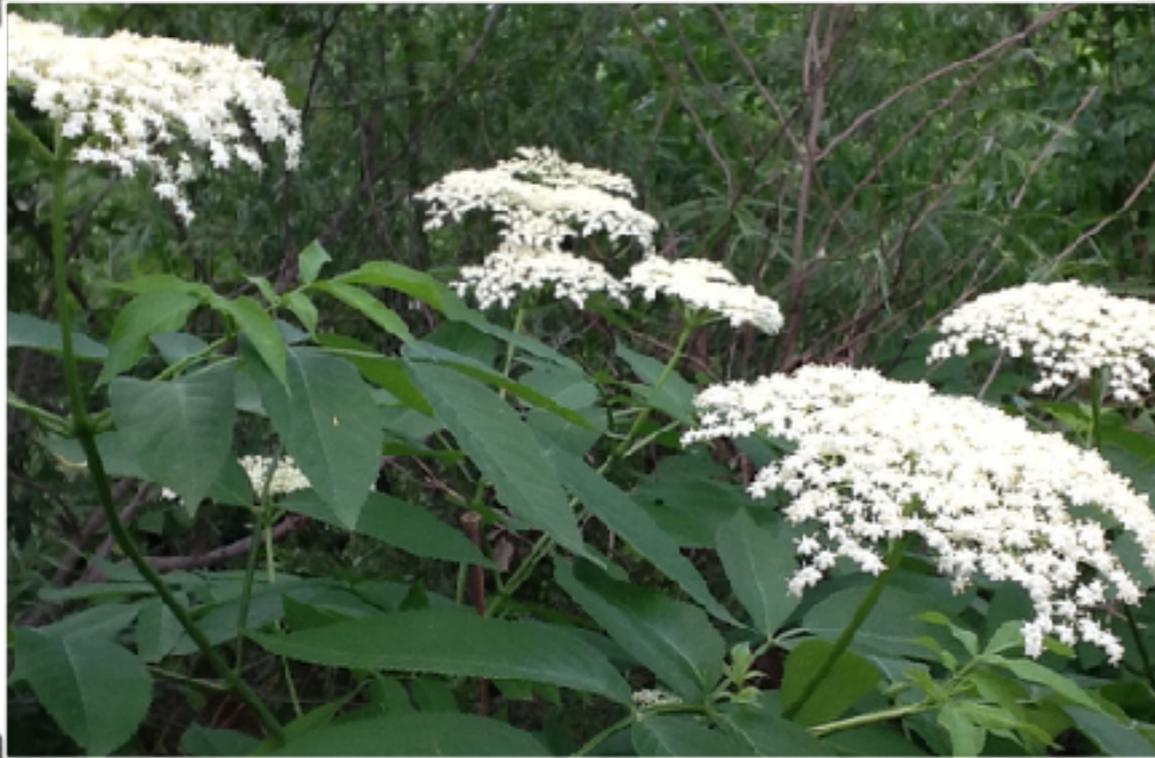
NATURAL HABITAT

- Native east of the Rockies - substantial local variability, limited research completed
- Open or semi-open areas along habitat edges
- Thrive best in full sun, tolerates partial shade
- Along streams, openings in wooded canopy
- Along roadsides - sometimes used as a windbreak
- Seedlings compete poorly with more aggressive species that shade them before roots established

PRODUCTIVE USE OF MARGINAL LAND

- Popular hobby crop, environmental management
- Nourishes over 60 native pollinators
- Soil retention - erosion & run-off control
- On berms in low wet areas, along ponds
- Field borders, windbreaks, irregular blocks, contours
- Established grower co-op as a potential buyer of elderberry grown for land mgt. or “third” crop.

ADAPTED HABITAT



Edge of field planting:
Elderflowers in bloom
and early season growth.



COMMERCIAL PRODUCTION

- Flexible grower strategies to size of planting
- Determinate and indeterminate cultivars planted by **blocks of rows** and not in rows of different cultivars
- Certified organic: cuttings, flower &/or berry crops
- Standard field equipment used for installation and field maintenance such as mowing and annual clear cutting
- Specialized crop handling equipment needed
- Yields **4,000 - 6,000 lb./acre @ 75 cents - \$5/lb.** when planted in fertile, well maintained fields

ORGANIC PRODUCTION CHALLENGES

Mostly similar to organic production of other berries

- Site planning (sunny), soil preparation
- Cultivar selection: Flowers only or Berries, too?
- Cuttings or Maxi Plugs, certified organic?
- First year: weed control, water, compost
 - Inter row grasses and legumes, mow
 - Plant every 2 ft. in rows, often 12 ft. centers ~ equipment
 - Pinch flowers, encourage root establishment



ORGANIC PRODUCTION ESTABLISHED FIELD

- Field and row maintenance
 - Upright stance, sunlight and air flow, rows 3 ft. thick
 - Frequent mowing, remove leaning/fallen canes
 - Harvest flowers from a yard high & down to ground
 - Annual flailing, cutting to ground of all canes (no cuttings)
- Pest Management
 - Traps, observation, neem & other organic controls
 - Early hand removal of fungus, cane borers, others
 - Variable deer and bird pressure

HARVEST CHALLENGES

Trained labor needed, technology limited

- Hand harvest, labor intensive processing over 3-6 weeks
 - Terry's De-stemmer, triple sink washing vs. conveyor
 - Screens, modified grape destemmer, rotating screens
- Different cultivars ripen at different times
- Some cultivar cymes ripen more unevenly than others
- Spot and remove SWD, bird spoiled cymes
- Destem, sanitize freeze the same day unless pre-sold fresh

HOBBY CROP VS. COMMERCIAL CROP

Potential demand for elderberry in the US says yes, but...

- Hobby crop: direct sales & on-farm value added strategy
- Retail challenge: public knowledge about elderberry
- Commercial ingredients: high min. vol. & lower price
- 2019 US production: 600-1000 acres, 3-6,000 lb./acre
- Capital challenges to retail market growth limits volume demand at premium crop prices - \$2-2.50/lb.
- Commercial ingredients profitable at what prices?
Different harvest and handling processes on option?

CORN, SOYBEANS, HOGS & ELDERBERRY?

- Certified Organic growers yielding 5-6,000 lb. acre net harvest
- West Branch Elderberry
 - Orange City, IA
 - 16 acres of Bob Gordon and Ranch
- Karl Fehr Farm
 - Whittemore, IA
 - 2 acres & adding



OWNING PRODUCTION

through a grower cooperative

- Elderberry's price to growers challenge not unique
 - Dairy farmers do not just sell milk
 - Ethanol plants do not just make fuel for cars
- Other crop farmers formed coops for the same reasons
- Shared capital formation & deployment
 - Facilities, equipment and inventory
 - Professional, trained personnel
- Co-packing develops demand to later support ownership

MEC FOR GROWERS

- Supports farm direct sales & on-farm value added production
- Provides shared risk entry to regional-national markets
 - Commercial buyers require dependable high volumes, quality and documentation for long term sales contracts
 - Size gives access to markets and major distribution channels for wholesale ingredients and retail products
 - Multiple Value Added opportunities, ingredients, economies of scale, variable financing/prices from multiple sources, markets
- Shared ownership of processing capabilities - means of production
- Encourages university research, secures government grants and shared product development costs on behalf of growers

SUMMARY OF STRUCTURE

Midwest Elderberry Cooperative is a MN 308B cooperative:

- **Voting Members - own 1 share Class A stock - \$500**
- Board of Directors elected by Class A shareholders
- Board selected officers & teams run operations
- Class A shareholders do not share in MEC profits/losses
- **Option of Class C shares** - Grower Delivery Rights
- Commercial participation in MEC valued added activities
- Board sets prices & policies with commercial grower input
- **Class D (preferred) shares provide investor options**
 - No voting rights or direct control of the coop
 - Passive / principle-based investor, “slow money”
 - May be a grower, co-processor, key wholesale buyer

CLASS C GROWERS

“C” as in Commercial

- **1 Class C share = 1 lb. commitment by both sides**
- **Cost of \$2/share or 3 lb. packed berries/share**
- Per Unit Retained Earnings - not fully paid at the time of sale to coop as set with members to manage cashflow
- Accounts set up to track Retained Earnings, paid later
- Coop has the option to offer non-members the same prices as members in commercial transactions - no profit sharing.
- Growers share proportionately in risk: MEC losses & profits from all sources @ variable price and payment contracts.
- Members must report their share of profits and losses regardless of the amount of cash received - tax law.

THE COOP OPTION

- **All members have access to MEC inventory to keep their direct customers happy despite a poor harvest**
- Commercial Growers aggregate harvest and processing to share resources/expenses to serve identified markets.
- MEC pays production cost (\$.75/lb.) soon after harvest.
- Growers share in overall profit/loss - **June 30 year end**
- Risk & Reward (net profit/loss) proportionately shared based on member's Class C shares in MEC
- Coop revenues/expenses from ingredient product market vary by sales mix: each ingredient > different profit margins

IF A PRIMARY CROP...

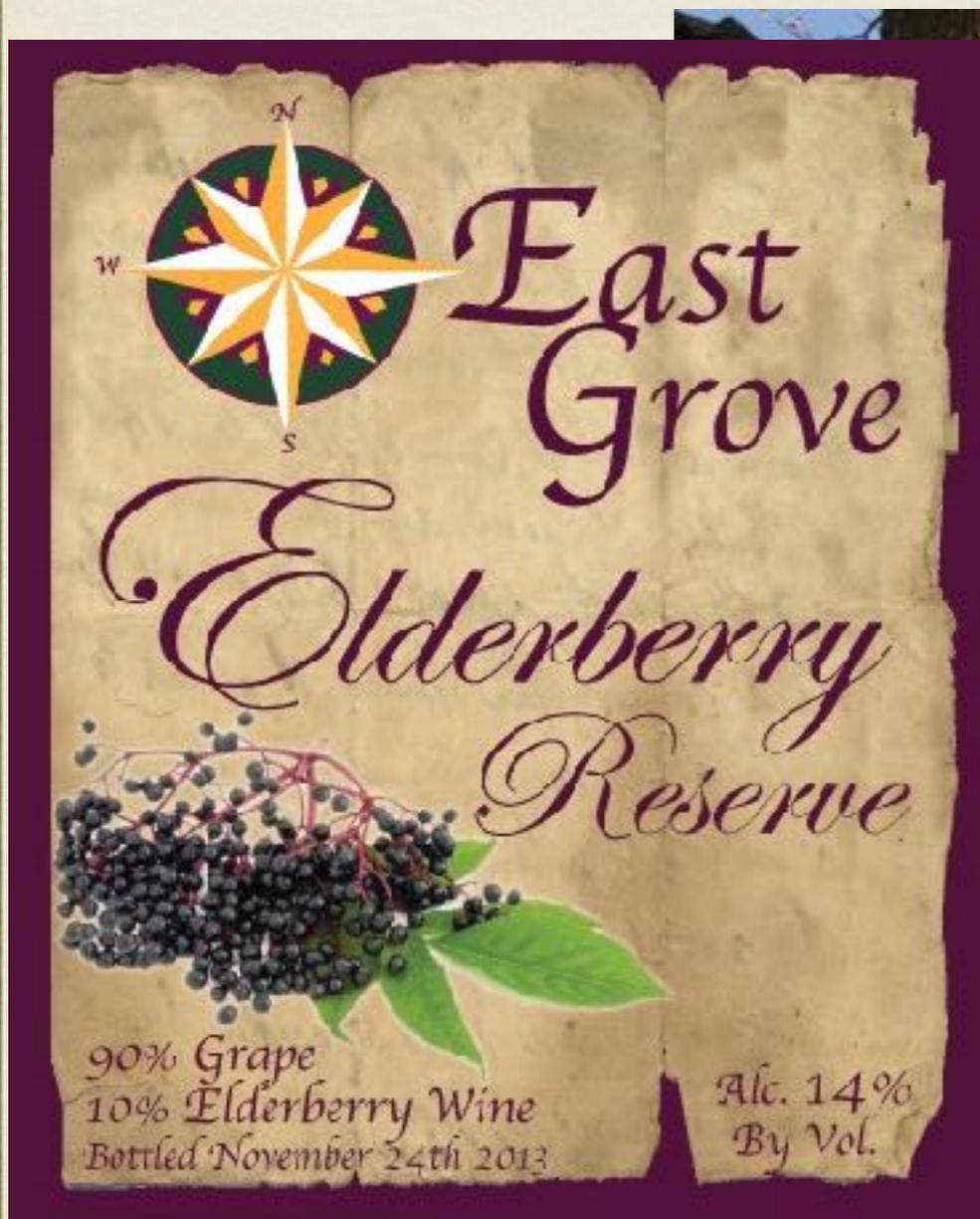
- Value Added participation **necessary to profit**
 - **Farmer Direct - higher margins, lower vol.**
 - **Coop Participation - diversified, aggregated**
- Farm Direct - Value Added strategy ~ your market
 - Choose what you love: product, market strategy
 - Manageable scale - in both farming & marketing
- Coop Value Added: Shared capital & business risk/\$\$
- Long term relationships: River Hills Harvest, MEC, local food and beverage processors, including other farmers

DIRECT SALES OPTIONS

- **Sell** fresh, dried or frozen **berries directly** to consumers:
 - Fresh/frozen: \$5-8/lb., **unknown allergies?** = real consumer risk
 - Dried \$20/lb. organic retail direct or online direct
- **Sell** fresh, dried or frozen **flowers directly** to local wineries, breweries, distilleries, supplement - ingredient, food stores, consumers:
 - Fresh/frozen \$15-35/lb.
 - Dried \$26-50/lb.
- **Develop farm-based value added products**
 - Sell locally, online, regional distribution
 - Products: jam, juice, syrup, tea, vinegar, wine, etc.
- **Sell** fresh picked, de-stemmed & frozen pails, elderberries **wholesale** into the supply chain: \$0.50 - 3.00/lb. - based on age of inventory, demand

EAST GROVE FARM

SALEM, IA



Joel, Kurt and Justin Garretson

IMPORT COMPETITION

- Existing commercial US market dominated and determined by low cost, often wild collected, European ingredients
- **US market requires certified organic ingredients in order to replace imported elderberry ingredients**
- **Wild collected** meets EU **certified organic** standards
- Questions of quality, SWD, low cost seasonal labor
- EU commercial production based on old traditions
- Elderberry concentrates, powders, extracts, dried whole berries, dried flowers, elderflower syrup

EU MARKET PROFILE

- Est. over 30,000 acres w/ annual yield of 107,000 tons, 95% from Austria, Italy, Czech Republic, Poland, Hungary
- Price equivalent of \$0.20 to \$0.35/pound for fresh, unwashed, on-the-cyme *S. nigra* berries
- Frozen in bulk without de-stemming for later processing
- Imported bulk dried berries wholesale for \$4-5/lb.
- Concentrate from Germany, organic, aseptic @ 64-66 BRIX quoted: \$6.20/lb. FOB East Coast
- Elderflowers a huge business in Europe
- European demand continues to grow, best quality kept in EU
- Wild collected deliver by far less nutrients (#14-Functional Ingredient)

NET CROP VALUES

Potential elderberry profit/acre computed from selling a collage of elder berry & flower products/ingredients

- Influences of global ingredient bias & low prices
- Elder berry / flower harvest & processing challenges: ripeness, pests, storage, % allocation to wholesale vs. direct
- Buyers of quality wholesale ingredients need to profit, to contract for needed quantities, on time, and to specification
- Require documented ingredient specs., COA, nutrients
- Risks of unknown US market acceptance - awareness of potential health benefits, value to environment

COMMERCIAL PRICES

- Est. annual yield **<500 tons**, concentrated in the Midwest
- Target MEC production cost payment of \$.75 lb. for destemmed and sanitized native elderberries packed frozen
- MEC price target of \$2.00 lb. for washed, quality graded, de-stemmed and frozen elderberries sold bulk berries
- Top MEC wholesale volume price of \$3.00 lb. for bulk frozen de-stemmed elderberries packed in 4 gal./25 lb. pails
- Reasonable Certified Organic premium (50 cents/lb.) due to high costs of retail distribution and commercial production
- Few retail / wholesale elderflowers to date: **<\$20/lb. fresh**

NETWORKED REDUNDANCY

- **Farmed supply:** grower cooperatives to set quality standards, secure **advanced sale contracts**, support research and promote best practices
- **Multiple MEC options:** partner with growers and/or buyers in processing
- **Multiple distribution channels:** local to national, wholesale & retail market penetration with a shared advertising/promotional campaign
- **Encourages growth of local relationships** between growers, local food and beverage producers, retailers and consumers
- **Accommodates multiple quality grades of fruit**, incl. Certified Organic, and engages both large and small wholesale/retail buyers
- **Promotes grower initiative and provides multiple opportunities** for participation to fit his/her farm plan and market production preferences

INGREDIENT OPTIONS

- Ingredient or lightly processed elderberry end products: fresh, frozen bulk berries and flowers...
- More processed: bulk raw juices, berry puree, elderflower syrup, dried elder berries / flowers, mixed antioxidant flavors/purees...
- Highly processed elderberry products: IQF berries, freeze dried berries, extracts, concentrates, powders as nutraceutical inputs
- Natural dyes: for use in food and textile industries
- **Each option has its own price structure, set of partners, distribution channel, market & capital requirements.**
- **All ingredient prices will be less than bulk frozen ~ production/distribution costs & market demand/competition**

DRIED EXAMPLE

- Copacker cost to convert frozen to dried elderberries is \$21/lb.
- AURI (Agricultural Utilization Research Institute, auri.org) grant to develop on farm, high quality decentralized dried elderberry / elderflower production
- MEC Bulk (300+ lb.) MEC Direct Prices to Distributors/Processors
 - \$17.00/lb. certified organic
 - \$15/lb. sustainably grown
- MEC Wholesale Direct Prices
 - \$18.50/lb. certified organic
 - \$16/lb. sustainably grown
- MEC Consumer Buyer Direct Prices / Online
 - \$21.00/lb. certified organic, \$8/4 oz.
 - \$18/lb. sustainably grown, \$7/4 oz.

GROWERS AS PARTNERS

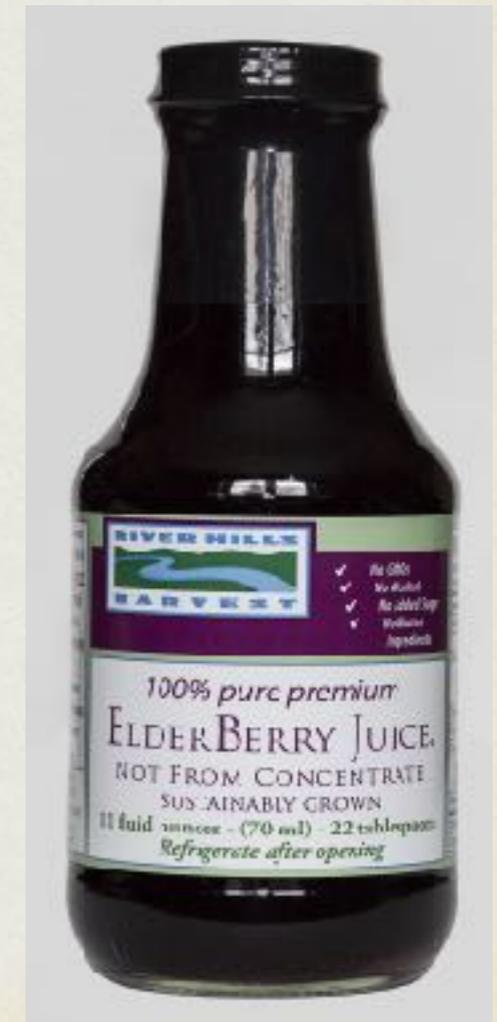
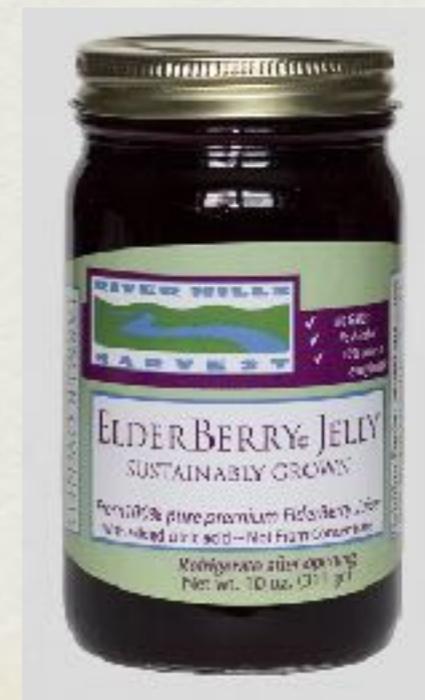
West Branch Elderberry & MEC & RHH

- *16-acre “Third Crop” - corn, soybeans and hogs*
- *Elder Berry & Flower Drying*
- *River Hills Harvest ElderBerry Jam*
- *Elderberry Brandy (Wine?)*



RIVER HILLS HARVEST KEY CHALLENGES

- Increase consumer demand through education
- **Transition all berry sourcing through MEC**
- Marketing/ Social Media
- Expand retail presence
- Retailer specific programs
- Product sampling
- Increased capital investment



RHH: INCREASE SCALE & INCREASE MARGINS

- **Regional-Specialty Distributors - Relationships**
- **Grow National Distribution: KeHE Distributors**
 - Natural & Grocery channels
 - Chains & Independents
- **Cost of Distribution**
 - Everyone needs a paycheck
 - Distributor & Retailer 20-50% mark-ups
 - Brokers & marketing promotions add 20% to cost
 - Freight



2,500 ACRES BY 2025

- **Harvested and sold - mostly pre-sold on contract**
- Attained by selling multiple ingredients/products > redundant wholesale & retail distribution channels
- Qualified buyers, including national brands indicate present demand of 1,000,000+ lb. of packed, bulk native elderberry
- **Certified Organic preferred by commercial buyers**
- **Growth rate depends on regional development of commercial harvest, storage and production hubs**
- **MEC needs more growers!**