

2026 Progress in the Commercial Production of American Elderberry

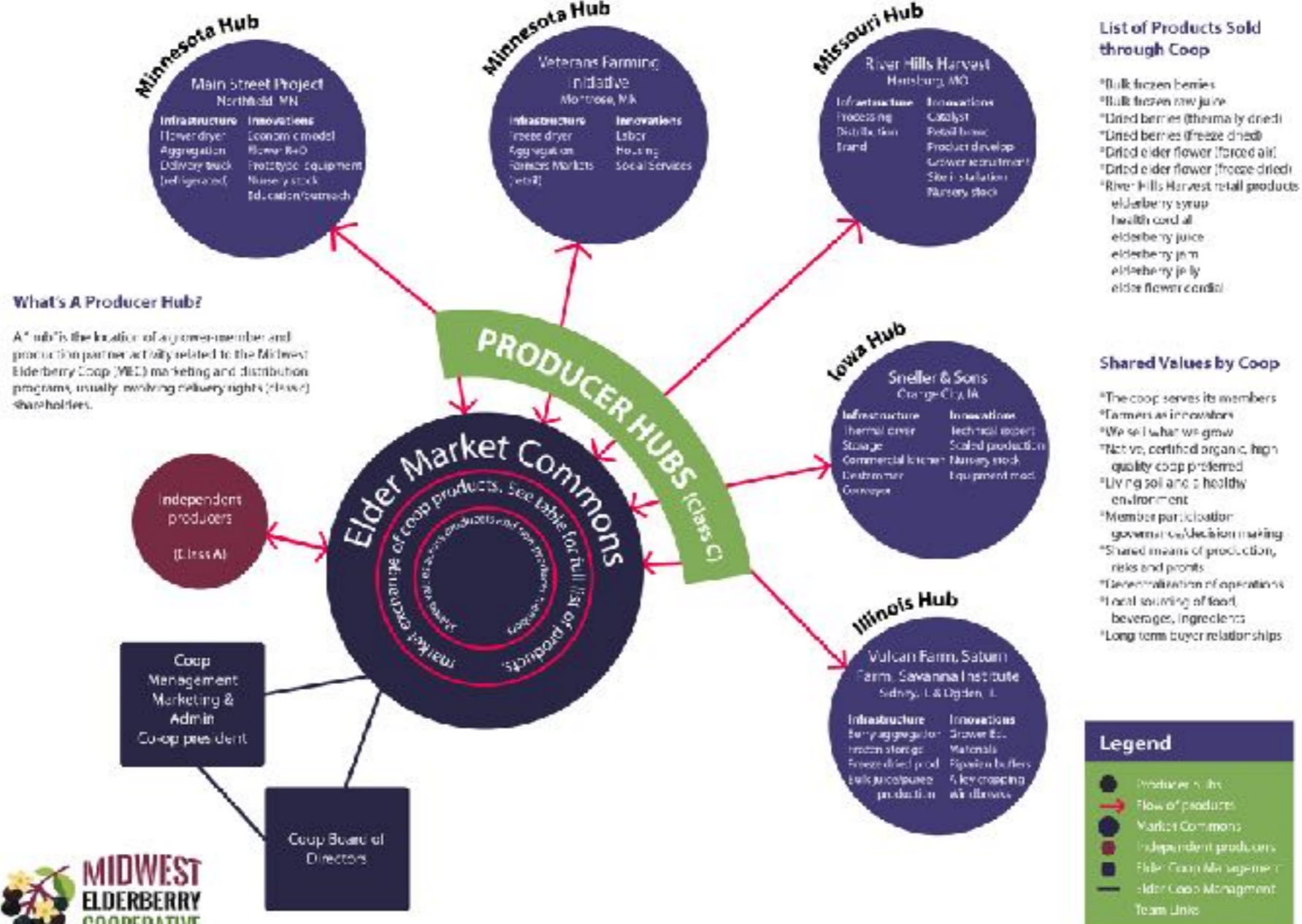


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The Big Vision

- **Decentralized Regional Processing Hubs**
 - ~ Grower participation in more of the value chain
 - ~ Chosen production varies by farmer resources & choice
 - ~ Quality, GAP, certified organic, reduced production costs
- **Decentralization helps with distribution logistics & total price**
- **Commercial volumes = repeat buyers @ competitive prices**
- **Commercial Competition: imported *S. nigra* ingredients used in 95% of American made products with elderberry**

Midwest Elderberry Cooperative



Regional Hub Org Chart



Most of us today

Small operations are successful



Some of us are better

Still not high volume commercial scale

Continuous Flow Destemmer Ready to Test & Calibrate

- Destem, clean, pack & freeze on day picked
 - ~ Organic production & SWD quality control
 - ~ Berries spoil in days even when refrigerated
- Current batch process 300-500 lb./hr.
 - ~ Labor required: 3-6 people or more
- Continuous flow @ 1000+ lb./hr., 2 workers
- Service growers within 2 hr. travel time of hub
- Process line to clean & pack > frozen storage



Augur Detail & Controls



Market Forces

Affect Farmer Revenues

- **Strong demand for elderberry remains**
 - ~ Consumer trend for local and healthy foods
 - ~ River Hills Harvest & others' presence in the marketplace developed American Elderberry awareness and demonstrated potential growth
 - ~ Big companies use low price, imported elderberry ingredients
- **Imports affect type/form of ingredients desired & local prices**
 - ~ High labor inputs due to hand harvest and machine assisted processing
 - ~ Dependable supply, year after year required
 - ~ Imports set volume buyer price expectations
 - ~ Buyer production lines designed for specific ingredient formats
 - ~ Requires more efficient high volume processing/production w/less shipping

Market Size 2026-2030

<https://www.technavio.com/report/elderberry-market-industry-analysis>

- Current US market about \$280 million
- Does not differentiate between European nigra and North American nigra canadensis berries
- North America is 42.6% of world growth
- CAGR of 7.8% - exceptional for food & beverage
- Key challenge: supply chain stability - availability, quality and cost due to environment
- Natural color stability hugely important
- Membrane extraction retains 20% more of the anthocyanins -
- 15% premium for clean label ingredients
- Shift towards functional foods & beauty - both internal and skin care
- 2030 Market of \$385 million

MEC's Network

- Funding & Growth Partners - Renewing the Countryside - MN/WI
 - ~ Private & Government Grants - time & expenses
 - ~ Food Investment Institute, Savannah Institute - WI
 - ~ UMN Forever Green Initiative - education & market development
 - ~ SAS-UI Ag Systems 5 yr. Grant: Elderberry, aronia berry and more
- MEC business plan: QB integrated finance & website re-design
- American Elder Berry Wholesale Ingredient Development
 - ~ Lead partner is Buehler Farms, LLC in MO
 - ~ Single strength juice pressed -> bulk juice, powders and concentrate
 - ~ Pomace by-product -> bulk frozen, freeze dried & dried powders

MEC Regional Hubs

Member-Partners in Production

- Buehler Farms / other grower-producers
 - ~ Web orders: berry & frozen raw juice packs; dried/FD berries,
 - ~ Commercial/pallet orders: frozen berries & juice; juice for powders & concentrate; pomace/pomace powders
- River Hills Harvest: wholesale shelf-stable elderberry juice
- Developing hubs & farm direct sourcing: MN, MO, SD, IA, IL, WI
 - ~ Aronia berries (frozen) & bottled juice
 - ~ ROC dried aronia and elder berries (flowers?)
 - ~ Sustainably grown frozen, dried & FD elder berries (flowers?)

Hub Business Plan

- \$280,000,000+ US elderberry ingredients market - imported
- Take 5% market share from imports with competitive pricing
- Contracts for crop & ingredients in advance of harvest
- MEC Distribution Class C shares: guaranteed farm sales - coop purchase, with shareholder participation in profits and losses
- Growing MEC gross revenues: in 2020 \$41K; in 2026 \$250K
 - ~ Only 16% of small businesses plan on capital improvements
 - ~ MEC current growth rate of 30+%: need more organic berries
 - ~ Estimate: by 2027 MEC growth limited by berry production?

Pilot Product Runs

- Identify best ingredient candidates by market demand
- Use business plan to secure project financing - 5,000+ lb.
 - ~ Minimum normal process run ~ 20,000+ lb.
 - ~ Analyze production costs and pricing
- Produce certified organic ingredient(s) in volume
 - ~ Samples for lab tests, product development
 - ~ Samples large enough for buyer pilot runs
 - ~ Independent lab tested for nutrient quality comparison

A Coop Answer

General Principles

- MEC distribution rights / C-shares: to proportionately share profits/losses through shared vertical integration/marketing
- American Elderberry can benefit from traditional economies of scale: special machinery, aggregation of crop, etc.
- Should lead to more efficient and better field and crop handling, thus to lower costs of production:
 - ~ Competes more effectively against global prices
 - ~ Generates higher returns on invested \$ and time
 - ~ Spreads the risks geographically and by market segment

An Open Cooperative

Every Farm Business is Different

- Cooperatives balance the freedoms of individual ownership with the opportunities of larger size: “OPEN” means more options.
- Open Coops flexibly optimize regional resources to give farmers multiple options of participation, like selling their crop directly.
- To date, MEC only operated as a broker: helping growers to sell.
- Specialized equipment/technology required to lower production costs > labor hours, fixed costs/lb. in desired ingredient format
- Contracted purchases to secure supply for high volume processing: must be cost effective to secure repeat buyers

Cooperation = Capital

@ More Dependable Farmer Revenues

- Present crop challenges make it easier for a Big Corporation to buy from MEC than directly from farmers.
- We work to reduce grower costs to lower prices - not profits.
- MEC will secure & retain multi-year sales contracts @ C-shares.
- Goal: consolidate harvest destemming, processing of American Elderberries in hubs with continuous flow capabilities.
- By combining our existing production and efforts we can attract good co-packer partnerships and buyers nationally.
- MEC members are coast-to-coast, but mostly in the Midwest.