



Growing Elderberry in the Upper Midwest

Expectations, Challenges & your Farm Strategy

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MEC-RHH Grower Database

- ◆ Upper Midwest = Broadly north of Chicago
- ◆ Upper Midwest Network - MEC members and candidates
 - **Iowa - 6**
 - West Branch Elderberry (existing hub, Orange City)
 - **Minnesota - 7**
 - Main Street Project (developing hub, Northfield)
 - Veterans Farm Initiative (future hub, Montrose)
 - **Wisconsin - 18**
 - Savannah Institute - agroforestry nonprofit (future hub, Madison)
 - ND, SD, MI, other states estimated at 5-10 farms
- ◆ River Hills Harvest, Central-Southern Midwest - 72
- ◆ Many resources @ midwest-elderberry.coop

West Branch Elderberry

Orange City, IA

Hub - Processing

Flows left to right starting with a modified grape destemmer through wash station, fan and conveyor for drying and quality control, then into a lined box or 4 gal. food grade pail.



West Branch Elderberry

Orange City, IA Hub

Commercial Kitchen in Trailer



700sf Dehdvdrator



Economics Must Align with Farm

- ◆ Each has a different environment, people, values, goals
- ◆ Can I grow elderberry profitably & sell my crop?
- ◆ MEC focused on two member strategy profiles
 - Local Direct & Commercial scale producers
 - Delinked Class A and C share requirement
 - Inclusive, flexible, scalable economic support to both
 - Commercial requires regional operations hubs
- ◆ Two economic options for three grower strategies
 - Smaller scale Local Direct own products - Class A shares
 - Small growers partner / aggregate to commercial scale
 - Commercial scale production ~ number of Class C shares

Market Components

Potential: 22,500 acres of harvested and sold elderberry

- ◆ Fresh or frozen berries and flowers: packed & U-Pick
- ◆ Dried elderflowers: thousands of lb. imported
- ◆ Dried elderberries: estimated 200,000 lb. imported
- ◆ Lightly processed: juices, jams, jellies, and wines
- ◆ More processed: puree, bulk juices, syrups and some nutraceutical inputs
- ◆ Highly processed elderberry products: extracts, concentrates, powders
- ◆ Natural dyes: dyes made from elderberries for use in food or textile industries

Northern Commercial Scale:

River Hills Harvest Retail Products and MEC Ingredients

- ◆ Mostly the same as for the rest of the Midwest
- ◆ Ranch preferred, Adams for vigorous reliability, variety
- ◆ Season timing is different: shorter & affects field work
- ◆ Plants are usually not dormant before snow, wet
- ◆ Hardwood cuttings taken in late March into April
- ◆ Nursery plants - starts/maxiplugs, ready in July
- ◆ Shortage of certified organic cuttings/“starts” in particular
- ◆ Using plants increases planting flexibility - more time
 - Field preparation, green manure, weed control potential
 - Can plant “starts” as late as early October > excellent growth in spring
- ◆ Variable deer and bird pressure > deer fencing probable

Geographic Perspective on Farm Planning

Decision Line: Alexandria, MN > US 8 ~ WI > Norway, MI

- ◆ Includes Michigan UP, northern WI, northern MN, ND, MT
- ◆ **Large scale commercial production** definitely more risky above this line
- ◆ Local Direct valued added products to sell locally-regionally / online
- ◆ **Micro-environment critical** north of this line, sometimes a bit south of it
- ◆ Choose cultivars suitable to **shorter growing season**
 - Adams, a dependable indeterminate - best berry/flower option
 - Ranch, an early determinate - favorite of large scale growers
 - Bob Gordon - best berry option, large & sweeter, less successful further north
 - Johns + local wild plants requiring hand pruning, not cut to the ground
 - Marge - determinate European *S. nigra*, vigorous, smaller cymes, larger berries, pruning, glycosides?
- ◆ Early spring exposure to sun - cold not a threat to early growth
- ◆ Hand pruning: more disease and pest issues (over-wintering like mites)
- ◆ **Focus on flower harvest** - some wild plants give abundant flowers, poor berry ripening

Smaller Scale Options

Local Direct

- ◆ Sell fresh or frozen flowers & berries to local wineries, food co-ops / consumers: packed pail or 5 lb. freezer bags
- ◆ Make and sell farm-based value added products at farmers markets, online and/or in retail stores
- ◆ Sell RHH packed frozen elderberries directly to MEC
- ◆ Growers partner in harvest and processing activities to share resources/expenses in selling to MEC hub
- ◆ MEC members can buy wholesale from the coop for their own production when their harvest is too small
- ◆ RHH packed pail: 4gal./25 lb. same day destemmed & sanitized, frozen berries with very few unripe, stems, etc.

Elderberry: Botany, Horticulture, Potential

Denis Charlebois, Patrick L. Byers, Chad E. Finn, Andrew L. Thomas , page 3.

The elderberry or elder (*Sambucus* ssp.) in production or growing wild in the northern hemisphere, may have the widest range of applications of all small fruits. Members of the genus *Sambucus* have a multitude of uses including: river bank stabilization and windbreaks (Paquet and Jutras 1996); wildlife food and refuge; ornamental, crafts and games; versatile human food source, and multi-purpose medicinal (Vallès et al. 2004).

Natural Habitat

- ◆ Open or semi-open areas along habitat edges
- ◆ Seedlings compete poorly with more aggressive species
- ◆ Thrive best in full sun or partial shade
- ◆ Along streams in floodplains
- ◆ Openings in wooded canopy
- ◆ Disturbed sites
- ◆ Along roadsides - sometimes used as a windbreak (p.7)
- ◆ All provide clues to farm land use planning

Productive Use of Marginal Land

- ◆ Many agroforestry / permaculture applications
 - Forest - field borders,
 - Windbreaks
 - Irregular islands or contours
- ◆ Likes full sun: produces with partial, not in shade
- ◆ Second soils: sunny slope, rocky, sandy
- ◆ Soil retention - erosion & run-off control
- ◆ Likes water, but not too much -
- ◆ Plant on berms in low wet areas, pond edges

Adams (2)

Natura Farms - 2014

1 year old

8-10 feet annual growth

Indeterminate

Large flowers

Berries ripen by cyme
cluster/finger

Cut to the ground

Grows back when
damaged



Row of Adams Flowers

Natura Farms
Elderflower Power Day
6-15-2016
3 years old



Ranch

West Branch Elderberry

Orange City, IA

2016 - 3 years old

6-8 feet annual growth

Determinate

Abundant flowers

Berries ripen evenly

Cut to the ground

Tolerates dryness and
clay soils better

Strongly prefers open
field and full sun and
suffers in a partial sun
understory location



Bob Gordon

Terry Durham

Hartsburg, MO

6-8 feet annual growth

Determinate

Abundant flowers

Decumbent cyme

Larges sweet berries

Cut to the ground

Berries ripen evenly on
primal cane only



Johns

Natura Farms - 2014

2 years old

8-10 feet annual growth

Determinate

Large flowers

Large berries ripen
evenly

Requires pruning

(Paul Otten, over 6')



Johns

Natura Farms

Johns Flower



Original Stand of Johns
2012-rarely pruned



Marge

MEC Minneapolis, 2018

3 years old

First & last to leaf

Determinate

Requires pruning

Smaller flowers/cymes

Much larger, squarish
berries

Ripens evenly

Glycosides?



Marge

Green Berries
2018



Marge

Marge Pruned
March 23, 2019



Marge w/Flower buds
June 10, 2019



Wild Cultivars Pruned for Flowers

Florabunda

6-25-18



Trifecta

6-24-18



Also berries.

Florabunda

Hand-Pruned, Minneapolis

March 23, 2019,



June 10, 2019



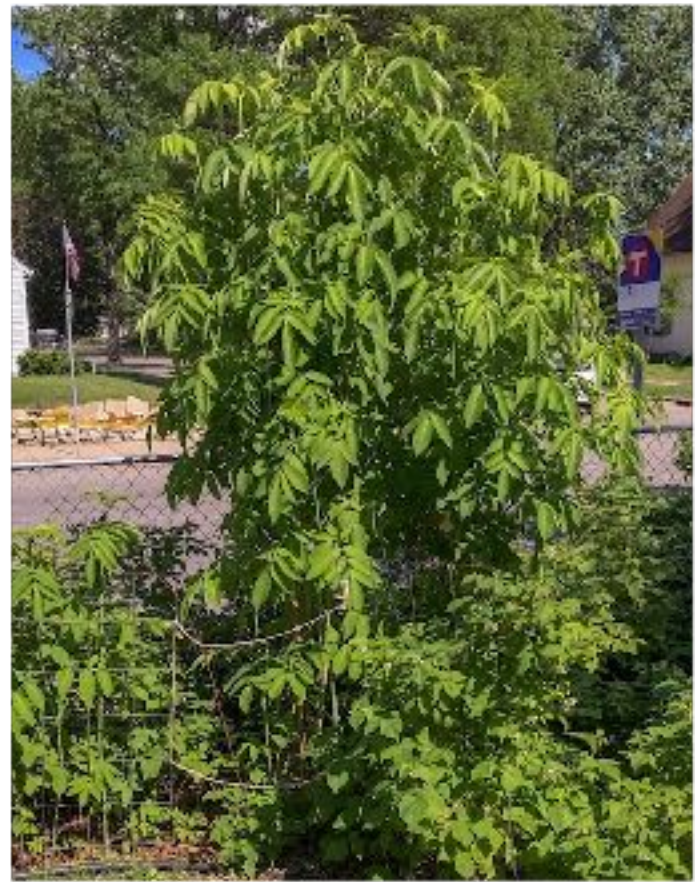
Trifecta

Hand-Pruned, Minneapolis

March 23, 2019



June 10, 2019



“Florabunda”

MEC Minneapolis, 2018
(from Minnehaha Creek)

3 years old

Determinate

Requires pruning

Massive, fragrant flowers

Berries do not ripen very
evenly



“Trifecta”

MEC Minneapolis, 8-28-18

(from Minnehaha Creek)

3 years old

Triple head on one cane

Determinate

Requires pruning

Massive, fragrant flowers

Berries ripen more evenly



Trifecta

Uneven Ripening
8-15-2018



Let Some Berries Drop
Evenly Ripe - 8-28-2108



“Anoka”

MEC Minneapolis, 2017
(from Minnehaha Creek)

4 years old

Determinate

Cut to ground

Fragrant flowers

Berries ripen evenly

“Is it a northern version of
Ranch?”



Anoka

MEC Minneapolis,
August 8, 2018

Anoka Primal Canes

Is the berry set largely
affected by wind and thus
needs more neighboring
flowers?

Not a question of needing
another cultivar to
pollinate but one of
needing other elder
flowers of any kind
blooming at the same
time.



Anoka

Vigorous Spreader - Cut to the Ground March 23, 2019

May 17, 2019



June 10, 2019



Common Plant Issues

Elderberry Rust
Eliminate Sedges from Field



Winter Freeze Damage
Sap freezes in cane from sharp deep cold
Do not fertilize in the fall.



Common Pest Problems

Cane Borers



Eriophyid mites



Common Pest Problems

Sawflies on Elder



Spotted Wing Drosophila



Northern Pest Problem

4 Lined Plant Bug



Leaf Damage



Antonio DiMaggio - Herbalist

Sacred Blossom Farm
Gilmanton, WI



Field testing Marge, Florabunda,
Trifecta and Anoka

Tony Wells - hand destemming



Blue Fruit Farm Observations

Winona, MN

Jim Riddle & Joyce Ford - 2019 MOSES Farmer of the Year

- ◆ Organic Researchers and certified organic activists
- ◆ Early MEC members selling Local Direct
 - Fresh/frozen elderberries to Birchwood Cafe and consumers (5lb. min)
 - Make and sell their own jams, jellies, steamed juice mixes
- ◆ 5 acres fully deer-fenced and bird-netted
- ◆ Variety of fruits: blueberry, plum, aronia, serviceberry, elderberry, honeyberry, and black currants - Titania most productive and reliable
- ◆ York, Johns, Adams, Bob Gordon, Wyldewood, Ranch and Nova
- ◆ Some issues with powdery mildew - only known instance -
 - manage by pruning, cane removal, and sprays of stilet oil & diluted (1:10) milk/water solution
- ◆ See bluefruitfarm.com for farming practices, pictures, “shop” button

Grants Often Require Grower Participation

MEC supports, co-applies, adds other resources

Meet Tony Wells

- Regeneration Farms
(Main Street Project member)
- Near Faribault, MN
- Produced his first dried flowers last year
- Expanding his commercial kitchen: loan & grant
- Adding acres of elderberry: Wyldewood, Ranch, Bob Gordon, Johns



Next Steps

2,250 certified organic acres of commercial elderberry needed by 2025 to meet present indicated demand

- ◆ Increase the number of MEC hubs - manage quality of crop and **access to technology > lower harvest costs**
- ◆ Expand relationships with national brands and bulk fruit brokers, local and regional wineries, breweries, distilleries
- ◆ Support grower supply directly to local markets of flowers and berries fresh/frozen, or as valued added products
- ◆ Develop certified organic production and processing
- ◆ Expand University Agroforestry participation in each state
- ◆ Increase horticultural and ingredient production research

More Acres for River Hills Harvest!

(a good photo by Rikki Patton)

