Aronia - Something for Maryland growers?

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Aronia

**Photinia (Aronia) malanocarpa**

**What is Aronia?**

- A wild native fruit bearing shrub inhabiting the mid-Atlantic region
- Most commonly found growing in the piedmont and mountain regions in moist soils
- In Eastern Europe it is extensively grown for juice, jelly, wine and color extract production
Significance to the Industry

Where’s the Market?

Potential Uses Include:

• Jams, Jellies, Juices, Wine
• Ornamental value
• Mitigation, Restoration
• Nutraceutical
• Can be “value added” niche crop for small farms
Significance to the Industry

Nutraceuticals

- Aronia has one of the highest Oxygen Radical Absorbance Capacity (ORAC) of any food product
- Antioxidants – flavonoids including anthocyanins and proanthocyanidins
- Extracts are being developed as dietary supplements
Aronia Nutrition

Source: USDA 2007
Aronia Production in the States

- Search term “Aronia” in Google
- Nutrition information
- *Sawmill Hollow Organic Farms, Iowa*
  - Product Line
    - Salsa
    - BBQ Sauce
    - Wine
    - Extracts

http://sawmillhollow.com/
Aronia melanocarpa: Alternative Fruit Crop: Cultural Considerations
Cultivars and Planting Stock
In the Trade

• ‘Nero’ from Eastern Europe
• ‘Viking’ from Scandinavia
• ‘Galicjanka’ New from Poland
Crop Management

- Aronia do not require cross pollination—Flowers are apomictic
- So far, very little needs to be done after establishment.
- Very hardy species.
Yield and Product

• Average yield for is 17-25 lbs per mature plant.
• Brix between 15 and 22%
• Yield is typically consistent
Aronia

Growth Habit and Pruning

- Aronia growth habit is relatively predictable - plants are shrub like in appearance
- Pruning is important after 7 years:
  - Prune any low-lying, crossing, dead, diseased or weak wood
  - Next concentrate on removing excess old wood to provide an open canopy
  - Prune in late winter or early spring
  - Increases productivity
Pest Management

Insect Control:

- Aphids on new growth
- Japanese beetle
- Late season grasshoppers
- Cherry Fruitworm
- BMSB
- Some OMRI certified pesticides available
Pest Management

Disease Control:

- Aronia not susceptible to major fungal diseases except quince rust or hawthorn rust (Gymnosporangium sp.)

- Shows resistance – occasional infection seen in fruit and stem tissue
Adjust pH to 6.3-6.8 before planting, although they will grow in lower pH

Fertilize with 0.25 oz (7g) N per plant and adjust P and K levels based on soils test
Space at > 3 ft x 8-13 ft spacing, depending upon desired plant size, maintenance (mowing), clipping and harvesting
Production Timeline

- **Establishment**
  - After amending soil, fertilize with ¼ oz N
  - Irrigation
- **Winter/Early Spring:**
  - Apply Dormant oil for scale/lace bugs
  - Fertilize
  - Pruning - remove dead/diseased tissue
Production Timeline

- **Late April**
  - Plant will begin bloom
  - Flowers apomictic

- **May**
  - Evaluate Yield
  - Look for Lace Bug and Aphids

- **June**
  - Evaluate disease (Rust)
  - Look for aphids on fresh growth
  - Watch for Japanese Beetles
Production Timeline

• **July**
  - Continue to watch for rust symptoms
  - Watch for Japanese Beetles
  - Watch for Lace bug

• **August**
  - Begin Harvest mid-to end of August based on BRIX target of 16 to 20%

• **October or early March**
  - Fertilize 0.2 oz N per plant
Harvest

- Harvest begins in mid to late August on the shore based on target BRIX 16% – 20%
- Hand harvest may be time consuming
- Mechanical Harvesting is used in Europe
- Hand held blueberry scoops
Nitrogen Effects on Yield of *Aronia melanocarpa*: An Alternative Fruit Crop
Nitrogen Fertility

Swedish study showed N affects on yield and fruit quality (Jeppsson, 2000)

High N increased yield, but lowered anthocyanin content and had no effect on Brix

Recommended 50 kg N / ha for optimum yield and quality
Mid-Atlantic Aronia Growers Association (MAGA)

First Annual Meeting

March 14th, 2012
11 AM to 2 PM

Wye Research and Education Center
124 Wye Narrows Drive
Queenstown, MD 21658
Cranberry Raspberry

The wonderful flavor of red raspberry is a perfect complement to our tart and refreshing cranberry juice.

Available in 200-ml juice boxes, as well as 16-oz., 48-oz., 64-oz. and 128-oz. recyclable plastic bottles.

INGREDIENTS:
100% FRUIT JUICE (FILTERED WATER SUFFICIENT TO RECONSTITUTE APPLE JUICE CONCENTRATE, FRESH PRESSED CRANBERRY JUICE, PEAR, ARonia Berry and RASPBERRY JUICE CONCENTRATES), CITRIC ACID, CALCIUM GLUCONATE, CALCIUM LACTATE, VEGETABLE COLOR, NATURAL FLAVORS, ASCORBIC ACID (VITAMIN C).

Nutrition Facts

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<th>Serv. Size 8 fl oz (240 ml)</th>
<th>Servings Per Container 8</th>
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*NATURALLY OCCURRING FROM FRUIT JUICE.

Related Juices
Naturally Cranberry
Cranberry Apple
Cranberry Grape
Cranberry Peach Mango
Cranberry Juice & More
Cranberry Wild Berry
Cranberry Pomegranate
Thank You!
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