Alaska’s Wild Berry Resources

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Traditional uses of wild berries

- Harvesting enough for yourself, family, neighbors

- Sharing wild berries as food, medicines, natural dyes with family, community

- Bartering
These traditions have evolved into:

- Small home-based family businesses
- Community businesses with employees
  - Part time, retired, seasonal
- Large companies - many employees, retail locations
Antioxidant Revolution

ORAC = oxygen radical absorptance capacity
total amount of antioxidants, beneficial or not, per gram
Antioxidants in Alaska wild berries compared to commercial fruit (in black)
What happens when you process the fruit?

UAF Cooperative Extension Service

- Jams
- Freezer jam
- Sauce
- Leather
- Canned fruit
- Frozen berries (control)

- Syrup
- Jelly
- Juice
- Dried
Water soluble antioxidant capacity per gram sample

ORAC Score for frozen and processed lingonberries

- Frozen Fruit: 160
- Frozen Juice: 130
- Fruit Leather: 550
- Dried Fruit: 820
- Sauce: 51
- Jam: 64
- Canned Juice: 120
- Syrup: 44
- Canned Fruit: 99

1 gram = 3 fruit
Water soluble antioxidant capacity per gram sample

- Frozen Fruit: 71
- Freezer Jam: 30
- Frozen Juice: 48
- Fruit Leather: 270
- Dried Fruit: 420
- Sauce: 34
- Jam: 36
- Canned Juice: 44
- Syrup: 32
- Canned Fruit: 43

ORAC score for frozen and processed bog blueberries
Wild Berry Harvesting

• Boom and bust years
• Remote locations
• Lack of labor for berry picking
Methods of managing berries for fruit production

- Unintentional Management of wild stands
  - Little or no control of yield
  - Labor intensive
  - Low tech
  - Not mechanized

- Intensive Management of wild stands
  - Yield maximized
  - Labor intensive
  - High tech
  - Mechanized

- Field Cultivation of wild berries

- Domestication And breeding of berries
Unintentional management

- Making pathways, roads into berry stands
- Removing stumps in a favorite pathway
- Breaking off branches while harvesting (pruning!)
- Removing berries from branches
- Adding human “nutrients” to soil

www.climatechangenorth.ca

www.insidepassage.com
Intensive Management of Wild stands

East Coast wild blueberry industry

60,000 acres
$75 million industry

Univ. Maine, with permission
Intensive Management of Wild stands

- Remove competing vegetation, rocks
- Frost protection
- Improve natural pollinators, import honeybees
- Ground leveling, stump removal
- Higher, more consistent berry yields
- Fertilize
- Ditching to remove standing water, melt permafrost
- Apply herbicides, insecticides
- Promote natural propagation
Learn about and observe the plant
- When does it flower?
- What are the insect pollinators? How do they live?
- Are there more berries on dry hillsides or bogs?
- What are the stages of fruit ripening?
- Any diseases? Insect pests?
Field Cultivation of Wild berries

- Fields prepared for agricultural crop
- Plantings in rows
- Irrigation, fertilizer, frost control, mechanical harvesting
Propagate quantities of plants

- Stem cuttings
- Root Cuttings
- Tissue culture
Genetic improvement for better fruit production

- Cloudberry
  - Norway, Sweden

- Lingonberry
  - Poland, Russia, Sweden, Germany

- Bog Blueberry
  - Russia

- Nagoonberry
  - Sweden