A PRAIRIE ORCHARD
IN YOUR OWN BACKYARD

PHILIP RONALD, PH.D.
RIVERBEND ORCHARDS

20 acres of fruit production
South side of Portage la Prairie
Fruit production: “Everything but strawberries!”
Fruit plant propagation

MARKETS
Focus on Manitoba market
U-pick
Pre-pick
Fresh
Frozen
Value-added processing:
Saskatoon pie
Jams
Apple cider

SASKATOON
6 acres
A prairie niche market
Pick by hand & machine
Best margin on fresh picked fruit
Shrinking: Disease
Bird control

HASKAP
4 acres
A new berry crop for the prairies
Blueberry-like fruit in mid to late June
Too early?
Hand picking is tedious
Plan for mechanical harvest

TREE FRUIT
2 acres
Focus on apples, pears
Grow in sod to assist with fall shutdown
Market local: on-spray fruit
Pursue processing options: cider
TART CHERRY

1 acre
An outstanding species for the prairies
Very precocious
Hand picking is relatively simple
Fence for deer
High demand for fruit, but pitting required

OTHER FRUITS

ARONIA CRANBERRY
GOOSEBERRY
RHUBARB

Small acreage trial plantings
Primarily for processing
Easy, no spray fruit crops for growers

OBJECTIVES

Ideas for the backyard fruit grower
What should I plant?
How do I tend to my orchard?
What can I do with the fruit?

OPTIMIZING SOIL & CLIMATE

NATIVE SOILS

Manitoba soil:
Lake Agassiz High clay content Alkaline pH
Best soils are deep, light to medium textured, and high in organic matter
Alkaline soils:
Ample macronutrients (N, P, K)
Limited micronutrients (Fe, Mn)

SOIL ENRICHMENT

Nutrition
Texture
Microbiome

Harvestable plants require nutrient replenishment
Compost:
Recycle nutrients Slow release
Fertilizer:
Organic/synthetic Change low Nitrogen blend
CLIMATE

Lack of precipitation can be overcome

Focus on temperature

Winter cold

Heat units

Spring / fall frost

Value of shelter, snow capture

MB advantage: Sunshine, low humidity

WINTER HARDINESS

Work with proven cultivars

Consult hardiness zone maps

Spring / fall cold - damage new growth and vascular tissue

Winter temperatures - e.g. Romeo

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FROST DAMAGE

The ultimate fruit-stopper!

Only one flowering period per calendar year

Temperatures of -2 C or combination of wind & cold

Early bloomers, e.g. apricot, saskatoon, cherry

SUNSCALELD

Southwest injury

Late winter sunshine triggers sap movement

Rapid cool down at sunset = contraction, cracks, blisters

Protect south side of tree:

White latex paint

Tree guard

Shade from afternoon sun

REQUIREMENTS FOR FRUIT PRODUCTION

POLLINATORS

Usually insects:

Honey bee - 2,000 flowers

Mason bee

Bumble bee

Vectors for pollen

Nectar reward

Temperature dependent

Plant early flowering bulbs & perennials
POLLINIZERS
Plants which provide appropriate pollen to others
Self-compatible e.g. saskatoon
Self-incompatible e.g. apple, plum
Ornamental crabapple
Effectiveness:
Quality pollen
Bloom time
Placement

PEST CONTROL
Fruit plants face many abiotic challenges
BUT
The greatest threats are living general vs specific pests
Aphids vs. fireblight

SANITATION
Homeowners: no chemical control
Pick fruit before fall
Clean up any fallen fruit soon after
Best option for breaking pest life cycles

FIREBLIGHT
Affects apples & pears
Bacterial disease – spreads like fire
Remove diseased twigs 15 cm below infection
Disinfect after each cut
Burn or bag wood

APPLE MAGGOT
Funnel damage within the fruit
Lifecycle: Adult fly emerges from underground in June/July
TRAP
Lays eggs on enlarging fruit
Larvae feed inside the fruit until autumn
CLEAN UP
Fruit fall – larvae burrow into soil to over-winter

SPOTTED WING DROSOPHYLLA
Invasive alien species
Appears to blow in every spring from USA
Targets soft fruits that mature after July 20
Watch out for larval fruit damage on: Tart cherry
Raspberry
Cherry plum
**ANIMAL CONTROL**

- Mouse, vole, rabbit
- Often winter damage – on or under snow

- Deer
  - Browsing in summer and winter

- Squirrels
  - Fencing
  - Tree guards
  - Remove habitat
  - Poison bait packs
  - Cages on young trees

**BIRD CONTROL**

- Waxwing
- Robin
- Catbird

- More noticeable in backyard orchards

- Netting:
  - Helpful for cherry, saskatoon, grapes
  - Essential for haskap

- Water-sprinklers may reduce piercing by thirsty birds

**PRUNING**

- Dormant pruning
  - Early spring
  - Create a scaffold of wide angle branches
  - 60-90 degrees
  - Promote internal air circulation and sunlight
  - Promote spurs
  - Remove diseased & dead wood

**IDEAS FOR BACKYARD ORCHARDS**

- **USE OF SPACE**
  - A diverse backyard orchard requires careful planning
  - Apple, pear, apricot may be too large for some yards
  - Focus on species that fit:
    - Dwarf apples
    - Plums
    - Tart cherries
    - Assortment of small fruit plants

- **HIGH DENSITY PLANTINGS**
  - Group trees in pollinating groves
  - Rows with tight spacing
  - Pruning required for aeration and solar penetration
  - Small statured trees
    - e.g. plum

- **Ussurian Pear**
- **Manchurian Apricot**
DWARF APPLE
- Stay off the ladder!
- The power of rootstock
- Mature at half the size of regular
- Fruit is the same size
- Produce fruit earlier

ESPALIER
- Espalier pruning along fences
- A two-dimensional dwarf fruit tree
- Train branches with cross wire
- Focus on spur formation
- A labour of love

HAT-TRICK APPLE
- Multiple apple varieties on a single tree
- Eliminates need for separate trees
- Provides a selection of fruit – different uses
- Do it yourself option - grafting

LANDSCAPE INTEGRATION
- "Edible ornamentals"
- Combine aesthetic and nutritional value
- Dense, compact plants with flowers, fall colour
- Non-suckering

HEDGES & FENCES
- Placing fruit plants in non-priority places
- Plant Hedges
  - Musc a long
  - Aronia - 6
  - Haskap - 5
  - Gooseberry - 4
- Cover Fences
  - Obscure a menagerie
  - Grape
  - Kiwi

CONTAINER GARDENING
- Container gardening for small fruit plants
  - Blueberry
  - Raspberry
  - Strawberry
  - Large pots
  - Suitable soil media for water retention
  - 6-8 hours of sun
  - Overwinter above -10 C
CULTIVAR SELECTION

APPLE
Most popular fruit tree in MB
Flowers rarely frosted
Large fruit & easy picking
Store well
Early/mid/late season cvs
Cultivars: ‘Gemini’ ‘Goodland’ ‘Odyssey’ ‘Prairie Magic’

KERR APPLECRAB
Resistant to fire blight
Intensely flavoured fruit – great juice
Matures in late September to early October
Frost promotes flavour
Excellent storage - 27 wks

PLUM
Cold hardy, pest free
Early bloomer = few pollinators
Complex pollination
Ripe fruits drop quickly
Cultivars: ‘Pembina’ ‘Tecumseh’ ‘Toka’

PEAR
Tallest of all prairie fruit trees
Very cold hardy, soil adaptable
Fruit over-ripen on tree, drop quickly
Pick early, ripen off the tree
Cultivars: ‘Early Gold’ ‘Prairie Welcome’ ‘Ure’

APRICOT
Most challenging of prairie fruit trees
Winter damage to flower buds
Bloom early = spring frost
Choose a spot that is slow to warm in spring
East side of house
Cultivars: ‘Casino’ ‘Bakers Gold’ ‘Debbies Gold’ ‘Westcot’
TART CHERRY

- Large shrubs
  - H: 8' W: 6'
- Self-pollinated, own-rooted
- Red fleshy fruit, picks clean 10-15 kg
- Must be pitted!
- Cultivars:
  - ‘Carmine Jewel’
  - ‘Juliet’
  - ‘Romeo’

SASKATOON

- Proven native fruit species
- Tasty purple fruit, 8 cm in diameter
- Grows to be large, leggy shrubs
- Suckering issue
- Cultivars:
  - ‘Northline’
  - ‘Smoky’
- Small stature:
  - ‘Parkhill’

HONEYBERRY (HASKAP)

- Compact plants
  - H: 4' W: 4'
- Frost-tolerant in bloom (- 7 C)
- Very unique, healthy fruit
- Breeding: increasing yield and fruit size
- Cultivars:
  - ‘Aurora’
  - ‘Honey Bee’
  - Boreal series:
    - Blizzard
    - ‘Beast’

RASPBERRY

- Easily grown
- Late bloomer, avoids spring frost
- Flower and fruit on 1 year old canes
- Manage suckers to promote floricanes
- Cultivars:
  - ‘Boyne’
  - ‘Souris’
  - ‘Red Mammoth’

CURRANT / GOOSEBERRY

- Small, compact plants
- Easy to grow, self-pollinating
- Few pest problems
- Gooseberry Cultivars:
  - ‘Pixwell’
  - ‘Poorman’
- Current Cultivars:
  - Red Lake
  - Bore series

PRAIRIE FRUIT PRODUCTS
To process available fruit into stable food products.

**THE CHALLENGE**

**Ideas:**

- Diversify orchard to ripen over several months.
- Two-stage processing.
- Fruit Share: Pick in peak season, store in air tight containers.

**TREE FRUITS**

- APPLE
- PEAR
- PLUM
- TART CHERRY

Large volume of fruit from single tree.

- Additional preparation required.
- Skinning, pitting, coring.
- Consider the cider option.

**BERRIES**

- A growing industry.
- SASKATOON
- HASKAP
- ARONIA
- RASPBERRY
- STRAWBERRY

- Pick clean in season.
- Freeze in shallow trays, then bag with label.
- Smoothies or processing later.

**SUPERFRUIT**

- A fruit with high anti-oxidant properties
- Blue, purple, black berries.

- Promote as more than food – natural medicine.
- Free radical scavengers, anti-cancer, anti-aging, anti-heart disease.

- Process carefully – fresh is best.

**THANKS FOR LISTENING**