




**A PRAIRIE ORCHARD  
IN YOUR OWN BACKYARD**

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RIVERBEND ORCHARDS





**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

Challenges:  
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, plums

Grow in sod to assist with fall shutdown

Market local, no-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  
Choose low Nitrogen blend






**CLIMATE**

A major force

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

e.g. Romeo

Winter temperatures kill flower buds

e.g. Mount Royal Plum

**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




**SUNSCALD**

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

Homeowner:  
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

Tunnel damage within the fruit

Lifecycle:  
Adult fly emerges from underground in June/July

TRAP  
Lays eggs on enlarging fruit

Larvae feeds 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

**Solutions**  
Fencing  
Tree guards  
Remove habitat  
Poison bait packs  
Cages on young trees

### BIRD CONTROL


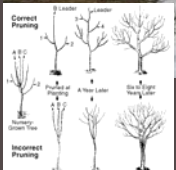
Waxwing  
Robin  
Catbird

More noticeable in backyard orchards

**NETTING:**  
Helpful for cherry, saskatoon, grape

Essential for haskap

Water-sprinkler may reduce piercing by thirsty birds

### PRUNING

Dormant pruning – early spring

Create a scaffold of wide angle branches  
60-90 degrees



Promote interior 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 pollinizing groves

Rows with tight spacing

Pruning required for aeration and solar penetration

Small statured trees  
e.g. plum

**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 low priority places

Plant Hedges  
Make a living "fence"

Aronia - 6'  
Haskap - 5'  
Gooseberry - 4'

Cover Fences  
Obscure a non-living fence

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**



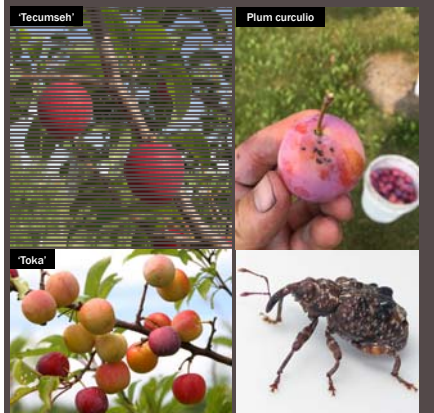
**APPLE**

- Most popular fruit tree in MB
- Flowers rarely frosted
- Large fruit & easy picking
- Store well
- Early/mid/late season cvs
- Cultivars:
  - 'Gemin'
  - '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  
in mid-July

Grow 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 2 year old  
canes

Manage suckers  
to promote  
floricanes

Cultivars:  
'Boyne'  
'Souris'  
'Red Mammoth'

### CURRENT / GOOSEBERRY

Small, compact  
plants

Easy to grow,  
self-pollinating

Few pest  
problems

Gooseberry  
Cultivars:  
'Pixwell'  
'Poorman'

Currant  
Cultivars:  
'Red Lake'  
Ben series

## PRAIRIE FRUIT PRODUCTS






**THE CHALLENGE**

To process available fruit into stable food products

**Ideas:**  
Diversify orchard to ripen over several months

Two-stage processing

**Fruit Share**  
2010 to 2016 shared over 63,000 pounds of fruit!



**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**


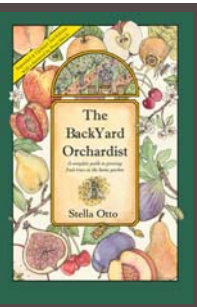
A fruit with high anti-oxidant properties

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**