

Issue 9– October 23, 2024

Fruit Crop Report



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Provincial Overview

Late apple variety harvest is complete. Yields for many apple orchards are below average due to a combination of factors such as drought stress from the past couple of seasons and pest stress. Growers have been collecting soil samples for soil testing. Strawberry growers are getting mulch equipment and straw bales ready for applying onto dormant strawberry fields in November. See articles on [When to Apply Straw Mulch on Strawberries](#) and [Importance of Straw Mulch on Strawberries](#). Most regions have sufficient soil moisture for perennial fruit crops going into winter.

Commercial Fruit Crops- Timely Topics

Which June-Bearing Strawberry Cultivars Should I Grow?

It is that time of year for strawberry growers to order plants for next year via the [Prairie Fruit Growers Association](#) (PFGA) membership plant order. The cultivar choice depends on yield, hardiness, disease and insect resistance, consumer acceptance and market (u-pick vs pre-picked).

Some cultivars are widely adapted in Manitoba. For example, Kent, is noted for its winter hardiness and good yields. Newer strawberry cultivars typically have improved disease resistance and are more suitable for pre-pick markets (i.e. firmer, larger, lighter red colour, classic strawberry shape).

In selecting a strawberry cultivar for a particular farm, growers should consult their local cultivar test results. Assiniboine College Horticultural Applied Research Production Program and Manitoba Agriculture Fruit Crops Program conducts strawberry cultivar evaluations that are shared with growers at PFGA and Manitoba Agriculture extension events/ webinars. Cultivars respond differently to climatic and soil conditions, so growers should test cultivars on their own farm prior to wide scale adoption. Only those that do well should be selected for their farm situation. Some growers prefer a blend of early, mid and late season cultivators to extend the harvest period and spread risk. In Manitoba, harvest times for early season cultivars would be mid-June to early July; mid season cultivars would be early to mid July; late season cultivars would be mid to late July (table 1). The most common cultivars planted by growers are Annapolis (early), Wendy (early), Kent (mid) and Cabot (mid-late).

Table 1: June-Bearing Strawberry Cultivars

Cultivar	Harvest Time	Cultivar Description (from Prairie Fruit Growers Association plant order form for members)	Provincial Fruit Crop Specialist Comments
AC Wendy	Early	Large berry, bright red, average firmness, excellent fresh flavour, vigorous, moderately resistant to powdery mildew.	Popular cultivar grown here. Nice overall berry, lighter red colour good for u-pick and pre-pick, firm, good yields.
Galetta	Early	Large berries that freeze well. Plants are vigorous and runner well. Red Steele Resistant (RSR).	New, cultivar from North Carolina, hardy zones 4-7, will test here in 2025 to determine potential in MB.
Annapolis	Early	Vigorous, very good yield, very large berry, light red, firm, mild flavour, very good quality, excellent for fresh market, RSR.	Popular cultivar grown here. Early so sometimes king blossom damaged by late frost, good yields.
Sable	Early	Winter hardy, productive, large berry, bright red, medium firm with good flavour. RSR.	Very early so most years need frost protection.
Archer	Early-Mid	Produces very large uniform fruit. Very aromatic and sweet flavour.	Uncertain if winter hardy in Manitoba.
Brunswick	Early-Mid	Berries are large, attractive and uniform in colour & shape.	Older cultivar, not grown much in Manitoba, could test on own farm.
Honeoye	Early-Mid	Excellent yield, large berry, bright red, glossy, very firm, very good productivity.	Older cultivar, good yields, good colour, could test on own farm.
Flavourfest	Mid	Large berries with excellent flavour. Longer growing season than most other commercial varieties. RSR.	New, uncertain if hardy in Manitoba, listed for zones 4-7
AAC Audrey (New)	Mid	Large firm berries. Berries are sweet and very tasty. Leaves are moderately susceptible to powdery mildew, similar to Mira.	New from AAFC Kentville, NS. Should be hardy, uncertain on yield potential, could test on own farm.
AAC Lila	Mid	Berries are large, med red, firm, conical and uniform in color, higher neck and easy pull, good flavour, shows some RSR.	Newer release from AAFC Kentville, NS. Should be hardy, uncertain on yield potential, could test on own farm.
Cavendish	Mid	High yield, large berry, bright red, firm, excellent flavour.	Older cultivar, not grown much in Manitoba, could test on own farm.
Kent	Mid	Vigorous, high yield, very large berry, dark red throughout, firm, good flavour, very good quality.	Popular cultivar grown here, more suitable for u-pick since berry is dark red with soft

			skin. Very hardy and good yields. Susceptible to all leaf diseases.
Mira	Mid	High yield, very large berry, bright red, medium firm, fair to good flavour, may be tart, useful for shipping. RSR	1990's release from AAFC Kentville, NS. Should be hardy, uncertain on yield potential, could test on own farm.
Jewel	Mid-Late	Vigorous, winter hardy, large berry, bright red, moderately firm, excellent flavour, excellent quality, freezes well.	Older cultivar, not grown much in Manitoba, could test on own farm.
Cabot	Mid-Late	Very large berry, juicy, suitable for U-Pick and direct sales. RSR	Popular cultivar grown here. Great for pre-pick as quite firm, large berries and high yields. Typically only get 2 seasons of picking as more winter injury 3rd year of picking.
AAC Evelyn (New)	Mid-Late	Very large firm berries that have good flavour and a glossy appearance.	Popular cultivar grown here. New from AAFC Kentville, NS. Should be hardy, acceptable yield, could test on own farm.
AC Valley Sunset	Late	Cultivar from Kentville NS Research Centre, large berry, average yield, large crown plants.	Very late, can run into SWD issues and very hot weather which reduce quality.

How to Soil Sample Fruit Crop Fields



Soil tests should be used to determine the suitability of a field for fruit crop production and to guide the ongoing fertility program. Strawberry and raspberry fields should be soil tested annually in order to match the yearly fertilizer requirements of the plants. Fruit tree orchards can be tested on a less frequent basis (every other year). Fertilizer rates must be based on sound data derived from soil testing as estimated nutrient levels are not sufficient to maximize yields.

When to Soil Sample

Spring or fall are typically good times to soil sample fruit crop fields. Sample at the same time every year to make comparing soil tests year to year more consistent over time. Fall soil testing is especially useful, if fertilizing in the fall before freeze-up.

Tools Required for Soil Sampling

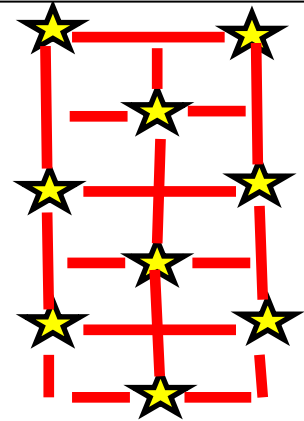
- Soil corer (push probe/ soil auger) or spade shovel.
- Clean bucket(s).
- New plastic bags or sample containers (off the shelf or supplied by the lab).

- Labels and marker pens to identify the sample before or after it is collected and to make notes.
- Record sheet or sample information labels to record sample details (such as site, depth, etc.). The format and type of information to provide is often listed by the soil lab guidelines.

Soil Sampling New Fruit Crop Fields

- Before planting into a new field take soil samples @ 0-6" & 6-12" depths.
- Use grid style sampling (figure 1).
- If part of field has different soil type or topography, then sample those areas separately.
- 15-20 locations sampled per field.

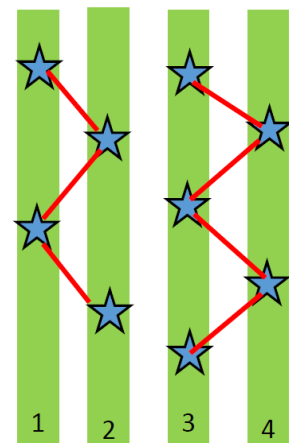
Figure 1: Grid soil sampling pattern for new fruit crop fields.



Soil Sampling Established Strawberry Fields- Annually

- June-bearing matted row production system (figure 2).
- Sample within rows in a random zig-zag pattern.
- Sample 0-6" depth as 90% of strawberry roots are in this zone.
- If part of the field has a different soil type or topography, then sample those areas separately.
- 15-20 locations sampled per field.
- Remove surface organic matter (leaves, straw) before sampling.

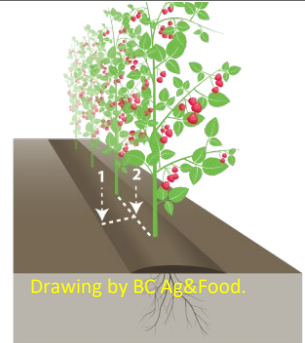
Figure 2: Zig-zag soil sampling pattern in-row for strawberry fields.



Soil Sampling Raspberry Fields

- Annually or every 2 years, sample 0-6" and 6-12" within the row.
- Sample centre of row and edge of row (figure 3).
- If part of the field has different soil type or topography, then sample those areas separately.
- 10-15 locations sampled per field.
- Remove surface organic matter (leaves, straw, etc.) before sampling.

Figure 3: Soil sampling pattern in-row for raspberry fields.



Soil Sampling Tree Fruit Hedge Rows, Saskatoons, Haskap, etc.

- Sample every 2-3 years at 0-6" and 6-12" depth within the row.
- Sample centre of row and edge of row (figure 4).
- If part of the field has different soil type or topography, then sample those areas separately.
- 10-15 locations sampled per field.
- Remove surface organic matter (leaves, straw, etc.) before sampling.

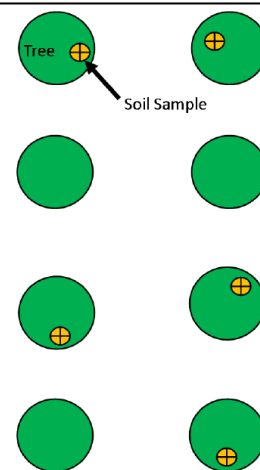
Figure 4: Soil sampling pattern in-row for tree fruit orchards.



Soil Sampling Apple Orchards

- Sample every 2-3 years at 0-6" and 6-12" depth within the row.
- Sample at random locations throughout the orchard within the tree's dripline (figure 5).
- If part of the field has different soil type or topography, then sample those areas separately.
- 10-15 locations sampled per field.
- Area that is 1/3 distance from the trunk within the dripline should not be sampled as little fertilizer application or uptake occurs in this zone.
- Remove surface organic matter (i.e. grass cover)
- High density trellised apple orchards use hedge row fruit tree sampling pattern.

Figure 5: Soil sampling pattern within apple tree driplines.



Soil Sampling Collection Procedures

Remove any organic matter from surface before using probe. Mix samples together in a clean pail. If you are using a hand probe, mark the target soil core depth on the soil probe clearly. Ship as soon as possible to a lab or store in cool space or freeze to slow down/ stop soil microbial activity (may cause higher N levels in sample than actual field N).

Be sure the soil sample submission information sent to the laboratory (online or paper) matches the actual soil sample depth obtained in the field. Sample at the same time every year (fall is ideal) and not on freshly tilled ground if in a new unplanted field. If tilled, then sample on truck/tractor tire tracks. Follow soil testing company checklist procedures. Soil testing labs that service Manitoba include Farmers Edge, A&L Canada Laboratories Inc. and AgVise, see company websites for more information.

Which Soil Testing Nutrient Package to Choose

For new fruit crop fields choose the full spectrum package which includes macronutrients (N,P,K,S), base cations (Ca, Mg, Na), micronutrients (B, Cu, Cl, Fe, Mn, Zn) and soil properties (soil pH, soluble salts, organic matter, carbonates, CEC, base saturation). For established fields, a smaller package that includes just macronutrients (N,P,K,S) can be selected. Micronutrients may be selected as well if deficiencies have been an issue in past soil tests. Strawberry plants are very sensitive to soluble salt levels in the soil so it is useful to track those levels over time if that has been flagged as a potential issue in previous soil tests.

References

Guide to Fruit Crop Production, Manitoba Agriculture, 2007.

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[Subscribe](#) to the Fruit Crop Report

[Province of Manitoba | agriculture - Strawberry - Fertilizer \(gov.mb.ca\)](http://gov.mb.ca/agriculture/strawberry-fertilizer)

[Province of Manitoba | agriculture - Soil Testing in Manitoba \(gov.mb.ca\)](http://gov.mb.ca/agriculture/soil-testing)

[Province of Manitoba | agriculture - Soil Fertility Guide \(gov.mb.ca\)](http://gov.mb.ca/agriculture/soil-fertility)

[Nutrient Management for Fruit & Vegetable Crop Production \(umn.edu\)](http://umn.edu)

Strawberry Fields Pre-Winter Care

Mulching and Pre-Emergent Weed Control

Mulching with straw is necessary to protect the crop from low temperature injury to crowns and roots. When properly applied, mulch keeps soil temperatures more uniform, prevents plants from drying out from cold and dry winds, and helps trap snow. Mulch is usually applied in late fall after several frosts but before air temperature drops to -6.7°C . Plants should be dormant. Timing varies with location but mulch is usually applied between late October and mid-November. See articles on [When to Apply Straw Mulch on Strawberries](#) and [Importance of Straw Mulch on Strawberries](#).

A pre-emergent herbicide should be applied just before mulching when plants are dormant to provide effective weed and volunteer grain control in the spring. Often a light irrigation/ rain is required to incorporate the herbicide.

Applying pre-emergent herbicides in the fall prior to mulching will give effective control of weeds germinating in the spring. Perennial weeds should be controlled with spot application of herbicides. Registered post-emergent herbicides for broadleaf and grass control can be applied in the bearing year prior to harvest, providing the pre-harvest interval (PHI) listed on the herbicide label is observed.

A pre-emergent herbicide can be applied after renovation to control germinating weeds up to strawberry dormancy. However, care must be taken to ensure the planting is strong enough to withstand the potential herbicide injury.

Table 2: Late Fall Pre-Emergent Herbicides for Use on Established Strawberry Fields*

Herbicide	Chem Group	Comments
Devrinol 2-XT	15	Effective on broadleaf and especially on annual grassy weeds, residual in the spring of 4-6 weeks.
Sinabar	5	Effective on annual broadleaf and annual grasses with fair suppression of quackgrass before it emerges. Weaker on pigweeds and common groundsel.
Chateau	14	Only apply when plants are dormant. Effective on most annual broadleaf and annual grassy weeds.

Authority 480	14	Only apply when plants are dormant. Effective on most annual broadleaf and annual grassy weeds. Best results obtained when the soil is moist at the time of application, followed by a light rainfall.
Basket 2XL/ Goal 2XL/ Arjun 24EC	14	Only apply when plants are dormant. Effective on most annual broadleaf plus field pansy and wood sorrel. Less effective on annual grassy weeds.

*The following herbicide weed control options are a guide only. Always refer to the product label for usage and rates before applying the product.

References

Guide to Fruit Crop Production, Manitoba Agriculture, 2007.

[Commercial Strawberry Production on the Prairies](#)

[Crop Protection Hub OMFRA](#)