



Healthy Fruit

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Prepared by the University of Massachusetts Fruit Team

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Profile of a British Columbia Apple Orchard

Bruce Currie's 30 acre apple orchard lies on a high bluff overlooking the southern arm of Lake Okanagan in British Columbia, Canada. Currie, along with his father-in-law, produce Gala, Spartan, Honeycrisp, Fuji, Braeburn, Ambrosia, McIntosh, Granny Smith, Silken, and Mutsu, all of which are marketed at single, grower-owned 'British Columbia Fruit' co-op in the Okanagan Valley. Here are some other facts that complete the profile of Currie's 'BC-303' orchard:

- Training systems: trellis, slender spindle, and super-spindle.
- Spacings: 6 ft x 14 ft to 1 ft x 11 ft, the majority at 1.5 ft to 9 ft.
- Density: 515 trees/acre to 4,000 trees/acre, the majority at 3,226 trees/acre.
- Soil type: Mostly sandy-loam to gravel (i.e., fairly weak, Currie likes to use a compost made from sewage sludge and wood chips to boost growth).
- Irrigation: Trickle throughout, electronically controlled complete with Atmometer (measures evapotranspiration) and data-logger. 50 ppm nitrogen supplied daily May through June.
- Grades: Gala, Spartan, and Fuji, 80-90% fancy & better; Braeburn, 75-85% extra-fancy; Ambrosia, 90% extra-fancy; Honeycrisp, 80-80% fancy and better; McIntosh, 70-80% fancy and better.
- Yields: Production ranges from 40 to 50 bins (25 bushels each) annually (i.e., 1,000 plus bushels/acre).
- Planting subsidy: BC provincial government provides replant payment incentive to growers to switch from low-density plantings to high-density, which covers a significant part of the tree costs. Also maintains land in orchard production.

Note: Jon Clements and Win Cowgill (Rutgers Cooperative Extension) are currently on-assignment in British Columbia attending the International Dwarf Fruit Tree Association (IDFTA) Summer Tour and submitted this report.

One More Reminder for Crop Disaster Assistance Sign-Up

Another reminder that sign-up has begun for the 2003 Crop Disaster Program (CDP). Part of the Agricultural Assistance Act of 2003, it reimburses producers for qualifying losses to agricultural commodities (other than sugar cane, sugar beets or tobacco) due to damaging weather or related conditions. The damages must be in excess of 35 percent for either the 2001 or 2002 crop for loss of production or 20 percent for quality losses. The program, administered by the U.S. Department of Agriculture's (USDA) Farm Service Agency (FSA), has no set funding limitation. If you think you might be able to take advantage of this Program (due to hail, frost, drought, etc.), contact your local Farm Service Agency office. More information is available at USDA Service Centers, and on FSA's website, www.fsa.usda.gov.

These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide - it is the legal document.

Apple Maggot Fly

So far, no apple maggots have been captured on either baited or un-baited red sphere traps.

Leafminers

Early sap feeding mines can now be found when monitoring leaf undersides. Be sure to check 20 leaves per tree (picked randomly) on at least 5 trees spread throughout the block. If mine numbers reach 50 per 100 leaves (0.5 per leaf) on McIntosh, and 100 per 100 leaves (1 per leaf) on non-McIntosh some treatment is appropriate. Materials choices include: Assail, Intrepid, Lannate, Provado, Spintor, and Vydate. Vydate and Lannate are harsh on predatory mites. Intrepid must be ingested to be effective, so will be most effective against LM if applied before egg hatch. Assail, while toxic to bees foraging on understory plants shows translaminar systemic activity and is relatively safe on beneficials. Both Assail and Spintor benefit from use of an adjuvant to improve coverage and redistribution.

All of the registered materials should be applied before mines begin to show up on the upper leaf surface.

Mites

In most locations, pre-bloom mite treatments continue to hold mites in check. However, as conditions appear to have turned hot and dry, growers are advised to monitor normally problematic cultivars and blocks carefully. Some sort of miticide rescue treatment is called for if 5 or more mites are found per leaf. If numerous eggs are found, but treatment threshold has not been reached, wait a few days and check the block again. Remember that all miticides (other than oil) should be rotated to delay development of mite resistance.

Miticide	Comments or special considerations
Acramite	Maximum one application per year. Best if used with a wetting agent.
Apollo	Not effective against ERM adults. Do not use either Apollo or Savey more than once every other year to deter resistance development.
Kelthane	Some mite populations are resistant. May cause fruit injury under slow drying conditions. Manufacturer recommends combining with a spreader/sticker. Quick acting, and 7-10 day residual.
Pyramite	Toxic to foraging bees. Only highest rates effective against Two-spotted mites. Allow 30 days between applications and not more than 2 applications per year.
Savey	Does not control adult mites. Do not use either Apollo or Savey more than once every other year to deter resistance development.
Summer oil	Can help extend previous mite suppression, but not effective in controlling an established and building population. Also can cause fruit injury on sensitive cultivars
Valero	Effective on mite eggs, nymphs and adults, but little or no residual. Thorough coverage is essential.
Vendex	Relatively slow acting

San Jose Scale

Lorraine Los' UConn newsletter reported that San Jose scale crawlers had emerged on June 28 in Tolland Connecticut, so emergence is likely to have begun in Massachusetts as well by now. Provado is a good choice against SJS, especially if leafminer also needs treatment. Other options to use at the beginning of crawler emergence include Esteem, Distance (NON-BEARING TREES ONLY), Imidan, Guthion and Diazinon. Diazinon is highly toxic to an important aphid predator, so it might be best to avoid that material if aphid colonies are present and predators are also (see below).

Green Aphids

Aphids can be found, but large numbers of syrphid, cecidomyiid and coccinellid predators have them on the run in most cases.

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