Workshop Title:

Organic apples in the Annapolis valley

Speakers:

Brian Boates, owner and operator of Boates Farm

Executive Summary:

Brian gave an overview of organic apple production in the Annapolis Valley. He described the solutions that he employs to deal with the many pest and disease challenges faced in apple production. He also spoke about his transition to an organic system and the benefits that he has witnessed as a result.

Main Notes:

Farm Description

220 acres.

20-Acre apples, 4 Acres pears

Sweet cider and vinegar

Sandy loam soil type.

In the Annapolis valley.

Gets dew coming off the Bay of Fundy in the fall. Helps with water needs in dry weather.

U-pick. Is off the beaten path, so they struggle with U-pick. Still, they were named one of top 10 U-picks.

Sells at the brewery market in Halifax. Sells apples for half what they you would get it at the grocery store.

Apple replant disease. Results in stunted trees. On farm, there was an old orchard that never produced due to this disease.

Started adding Sheep manure yearly. After 3 years they were getting hugely improved yields. Certified organic. Was what sold him on organic systems.

Apples

Scab resistant varieties. :

Redfree, novamac, liberty, crimsonCrisp.

Novamac - starts to drop just as it is getting ripe. Common trait in scab free varieties.

Liberty - supposed to be best organic variety. Loses flavour too quickly says the speaker.

CrimsonCrisp - Long season apple. Large, solid red, can be ruby red, very resistant. Trees are susceptible to fire blight. Great flavour.

Honeycrisp. Game changer for organic apples in NS. It is resistant to many diseases. Brian charges 50% premium and is still his top seller.

Bosc pear is very resistant.

Cortland is great old variety.

Rhoads island greeny. Great variety for vinegar. Very sour.

Gala.

Highly susceptible to apple scab.

Once soil was built up, scab has been less of a problem.

NovaMac does not need much intervention. Great potential for the future.

Old varieties are being pulled for newer varieties on a huge scale now.

Honeycrisp have replaced Macintosh.

Pears.

'You plant pears for you heirs'

Higher organic content soils. Pears perform very well.

Apple trees. Color changes drastically with fertility available to the plant.

Organic methods have allowed trees to withstand moisture shortages.

There is a slump in tree health in transition to organic methods.

A lot of people write-off organic as not feasible in Maritimes too quickly.

5 years to get results in his opinion.

Replant 5% of orchard every year.

Pruning.

Trellised orchard.

Branches on a onward angle. Will give uniform apples along branch.

Trellis on 2" steel pipes.

3-4' spacing on supports.

Could also use cedar for supports.

Challenges and ways to combat

Main problems in organic apples: apple scab, coddling mother, and apple maggot

Even resistant apples are susceptible to powdery mildew. Needs to use organic sprays.

Products for controlling apple scab.

Lime sulphur - considered very effective, too harsh and expensive in speaker's opinion.

Copper sprays used in the spring.

Coddling moth trap.

Integrated pest management. Only targets pests that are a problem in that year.

Based on numbers in traps, can decide to intervene or not.

Specific. Not broad spectrum.

Products for controlling coddling moth.

Isomate C+. Intoxicates males and stops them from mating.

Apple maggots.

Hatch out of ground and fly around for 1 week before they are sexually mature.

There are not many predators for them.

Products:

Surround, entrust, GF - 120 (very targeted for this pest)

You can trap-out some pests.

You can cut into an apple and cover it in tangle foot and hang it in trees. Will attract all flies in the area and trap them.

Inputs

Apple pumice compost.

Ideal thing to add back into the orchard.

Mix with hay and compost. Otherwise the N gasses off and is lost. Kills the grass that is there.

Going to be producing hay just for compost purposes.

Also uses beef manure.

40-80 lbs. nitrogen per year.

Important to make sure apples are getting enough N to trees.

Very easy to not get enough N in apples.

If insufficient, it will affect the next year. Lack of buds.

Supplements.

Do foliar sprays.

Tissue report.

Boron is the most important micronutrient for apples.

Honeycrisp. Usually needs supplemental spray. Has found he doesn't need it since switching to organic productions.

Resources

Organic apple production guide for Atlantic Canada. Published by Agriculture and Agri-Food Canada.

Great resource, but it has not been updated in many years.

A grower's guide to organic apples. By Cornell University.

Mills Table. Effective to predict when infection periods are likely.

Effective tool for organic farming.

Great weather forecasting compared to years ago.

Spots table.

Common Mistakes in Planting and Establishing High-Density Apple Orchards

By Terence L. Robinson

Miscellaneous

Replant disease. Thinks using synthetic fungicides causes this.

Narrowing of the soil biology is cause of disease.

'In farming, what you save is what you make'.

Strength of final vinegar is related to sugar in apples.

4-5% stronger in organic apples vs. conventional.

More sugars in the organic apples.

Need more vigorous rootstock for organic production.

Trees seem to weaken during bloom. Trees are susceptible during this window.

Speaker thinks that some sprays are necessary.

Direct market. You need to have what they consumer wants.

Organic growers: there are about 6 in the valley. (People he is aware of)

Keeps fruit from his best trees for storage.

Better soil health instead of chemical interventions.

Storage

Apples: 2-3C is ideal

Pears: 0- -1 is ideal for pears. High humidity. Slush on the floor.

What other fruit will have a future in region? Organic plums. Organic peaches.