

## **Keys to Successfully Growing Honeycrisp in Nova Scotia**

Larry H. Lutz

Scotian Gold Cooperative Ltd. and Lutz Family Farm Ltd,

Rockland, Nova Scotia B0P 1E0

[larry.lutz@scotianguard.com](mailto:larry.lutz@scotianguard.com) 902-679-6790 office; 902-680-5027 cell

The introduction of the Honeycrisp apple variety was the most important event in the history of the Nova Scotian apple industry since the loss of the overseas markets following WW II. While sounding like an exaggeration, there has never been a variety in the history of our industry which caused such an immediate reaction in terms of consumer demand and grower profitability.

It all started with the chance viewing of some Honeycrisp fruit in Washington State in 1996 by some of our growers. This chance encounter led to limited plantings that spring and substantial plantings every year since. In 2012 Honeycrisp surpassed McIntosh as our #1 fresh fruit variety in volume; having surpassed all others in dollar value a number of years prior.

The original trees were planted on M-26 rootstock. Failure to manage the vigour properly led us to believe that we should be using larger rootstocks. We then went through an era where a great number of trees were planted on M-7, CG-30, M-4, MM-106, MM-111 and B-118 rootstocks. Eventually we realized that with tighter spacing's, detailed pruning and precise crop load management, more dwarfing stocks were a probably a better choice. The standard plantings now consist of M-26 rootstock planted at 2'-3' x 12-14'; and M-9 planted at 18"-2' x 12-13'. Other stocks such as the M-9 sized Geneva and Budagovsky series are being tried in limited numbers.

All planting systems are now supported. The most common system consists of a two-wire trellis with a leader support attached to each tree. This is usually an electrical conduit, although bamboo and 12 gauge wire has also been tried. The trellis is supported by 12' pressure treated poles driven 30" in the ground spaced every 30-40' in the row. Various four and six wire trellises have been tried, but the growers have tended to be unhappy with the constraints on movement imposed by these systems.

Crop load management is probably the single most critical management exercise. Honeycrisp trees tend to flower heavily and regularly if not over cropped in the previous year. Many blocks now receive a full bloom treatment of Ammonium Thiosulphate (ATS) followed by 3-5 l/Ha Sevin XLR (carbaryl) and 3-5 ppm of naphthalene acetic acid (NAA) at 8-10 mm fruit size. This is occasionally followed by a second application of NAA prior to 15 mm fruit size if necessary. Very little benzyladenine is used as a thinner. Almost all blocks are thinned by hand as well.

Apple scab is not a problem, however Powdery Mildew, Brooks Spot, Flyspeck and Black Rot are. Thus we keep up a regular fungicide program for the entire growing season. Bitterpit is not a severe problem here. Four to six applications of calcium chloride 77% flake is the standard program. Other formulations of calcium are used by some growers with success.

Harvest management is crucial. The fruit starts to colour early in our area due to the cool nights and moderate daytime temperatures. As a result, we are able to start picking when the fruit is quite immature. This allows us to take 2-3 picks before the fruit is over-mature. If it were not for this we would never be able to get over the acreage that we have to pick. We are now using the recently introduced Sintelesia DA (Delta Absorbance) Meter to produce a standard measure of maturity. We do not apply Retain to delay maturity or hold fruit on the trees, as pre-harvest drop is generally not a problem. Some growers have tried under-tree reflective mulch to improve fruit colour, but the results (to me) are inconclusive. All stems are clipped at harvest using lemon clippers.

All fruit undergoes a period of warming or “pre-conditioning” prior to CA or cold storage. This has eliminated (for the most part) ribbon scald and some of the other superficial problems. All fruit is run across a Greefa pre-sort grader and through an internal defect sorter. This takes out any of the fruit with internal browning, a disorder which still shows up in low levels most years. Pack-outs average 85-90% fancy fruit, with the size peaking a little smaller than other areas where it is grown.

While not a simple apple to grow, Honeycrisp seems to like our cool maritime climate and, as previously noted, has done more to change the economics of tree fruit production in Nova Scotia than any other single event in our industries history.