

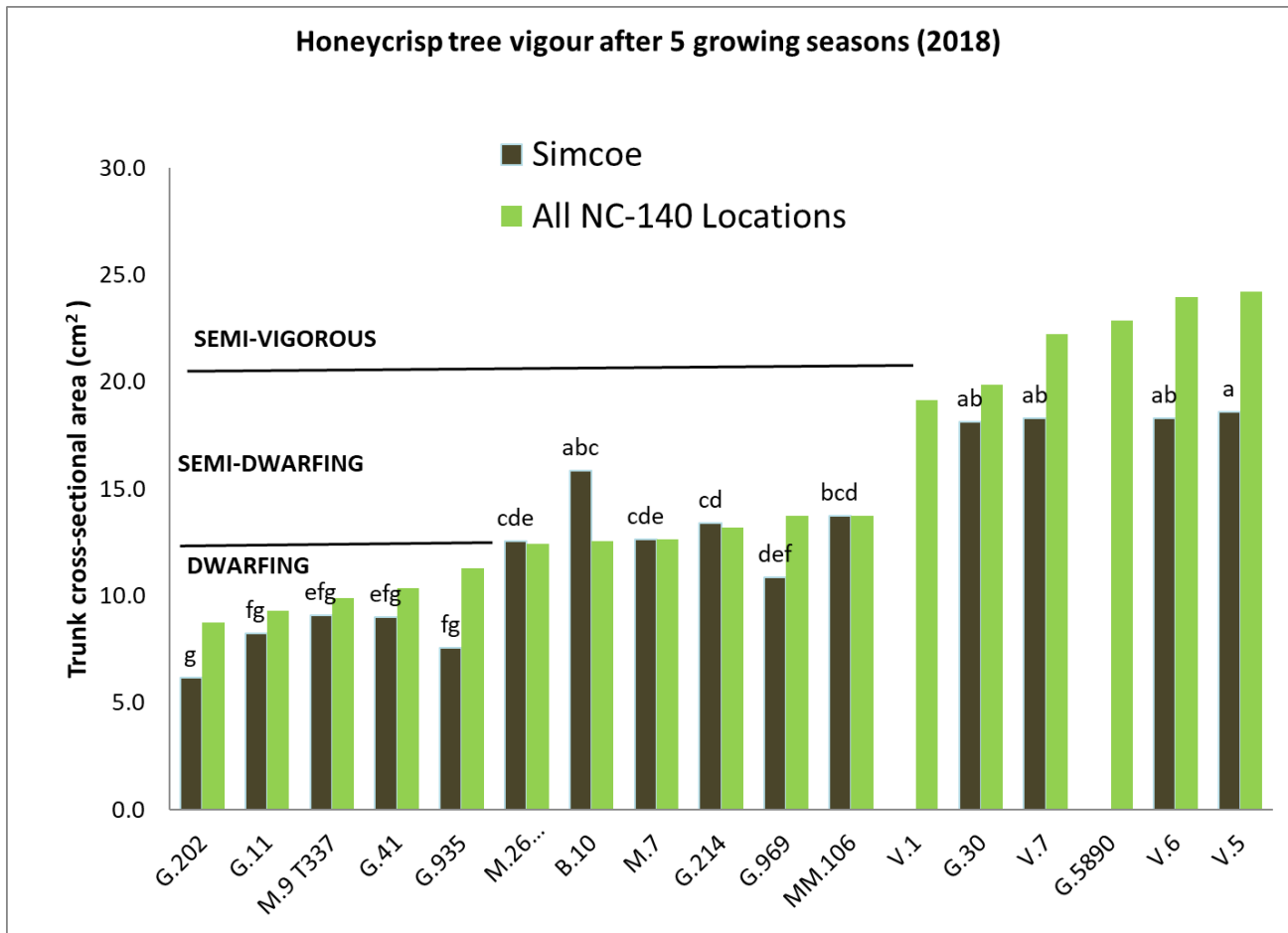
# IFTA Summer Tour - Pomology Research Program

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## Project 1: NC-140 Honeycrisp Rootstock Planting

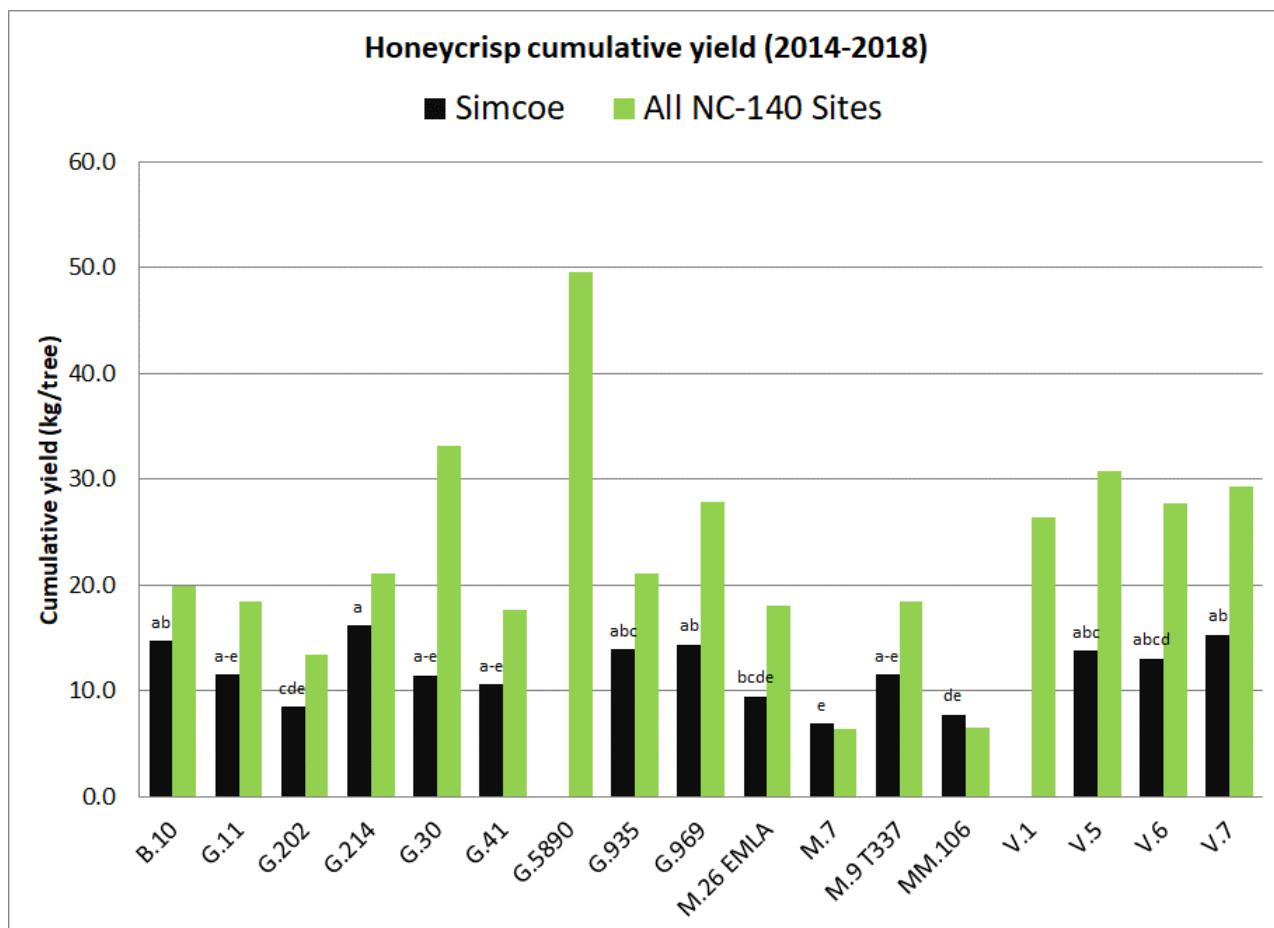
- Orchard established in 2014
- Honeycrisp 4 x 12 ft (1.2 x 3.7 m) Aztec Fuji: 5 x 13 ft (1.5 x 4 m);
- Chemical thinning: 2.1 L Sevin XLR + 10 mg/L NAA (8-9 mm), 1.5 L Sevin XLR (14-15 mm)
- Bitter pit mitigation: 5% CaCl<sub>2</sub> solution (w/v) (DowFlake™ Extra; 93-87 % CaCl<sub>2</sub> flakes) applied at 10 day intervals, mid June to early September (8 sprays); 1000 Litres/ha

More details: <http://bit.ly/2Y6Sju8> <http://bit.ly/2LvT1zc>



### Tree Vigour

- Tree vigor ranged from semi-vigorous to dwarfing (see figure above)
- The green bars represent data from all NC1-40 locations and the grey bars represent data for the University of Guelph, Simcoe
- Vigor can be grouped into three categories:
  - Greater than M.26 : V.5>V.7>V.6>G.30>B.10>MM.106>G.214 ;
  - Equal to M.26: M.7, G.969
  - Equal to M.9: G.41, G.11, G.935: Less than M.9: G.202.



### **Cumulative Yield**

Rootstocks have varied widely in cumulative yields (2015-2018). At Simcoe, B.10, G.214, V.7, G.969, G.935, V.5 and V.6. whereas G.5890, G.30 and V.5 had the highest cumulative yield across all NC-140 sites.

**Root suckers:** has been low in the Simcoe and most of the other NC-140 locations. G.5890 and M.7 (Simcoe only) have displayed the greatest amount of suckering

**Tree Mortality:** The greatest tree mortality has been on G.41 (20% Simcoe, 10% all sites)

**Cumulative Yield Efficiency:** G.935, M.9 T337, G.202, G. 41, G.969 have displayed the highest CYE in Simcoe. Across all locations B.10, G.935, M.9 T337, G.11, G.969, and G.5890 have shown the highest CYE

**Fruit Size:** No rootstock effects on average fruit weight were detected in 2017 or 2018

## Project 2: Identifying Premium European Cider Cultivars for Ontario based on Horticultural Orchard Management and Fermentation Parameters

Planted: 2015

Spacing: 1.5 x 4.0 m (1667 trees/ha); vertical axes training system.

Rootstock: M.9

Detailed Report: <http://bit.ly/32KhAOe>

### Horticultural and juice attributes of cider apple cultivars planted in 2015 on M.9 rootstock. University of Guelph, Simcoe, Ontario, 2017 (not for publication)

Cultivar	Tree/fruited characteristics					Juice characteristics					
	Full bloom date (2019)	Harvest date (2018)	Greatest cumulative yield (kg/tree)	Largest and smallest fruit weight (g)	Highest and lowest trunk cross-sectional area (cm <sup>2</sup> )	Biennial bearing (based on limited data)	Highest Brix (°)	Highest titrable acidity (mg malic acid/100 mL juice)	Lowest juice pH	Highest yeast assimilable nitrogen (mg N/L)	Highest polyphenols (µg gallic acid eq./mL)
Ashmead's Kernel	16-May	27-Sep		173	69	Low	17.3				
Binet Rouge	18-May	4-Sep		57	19.4						900
Bramley's Seedling	19-May	17-Sep	17.7	297	21.1	Low		170	2.84		
Breakwell	21-May	11-Sep			17.3			170	2.95		
Brown Snout	23-May	15-Oct			8.1		17.0			160	
Brown's Apple	22-May	22-Aug									790
Bulmers Norman	22-May	27-Aug				High				200	830
Cline Russet	20-May	9-Oct			8.2						
Cox Orange Pippin	19-May	17-Sep								160	
Crimson Crisp	19-May	4-Oct		166	6.9						
Dabinett	19-May	27-Sep									
Enterprise	18-May	6-Nov	18.0	229							
Esopus Spitzenberg	17-May	18-Oct									
Frequin Rouge	23-May	18-Oct		81	74	High	16.2				
Golden Russet	17-May	25-Oct				Low	16.8			190	
Goldrush	17-May	6-Nov	16.9		8.4						
Grimes Golden	19-May	15-Oct	16.1		88	Low					
Kingston Black	22-May	11-Sep									
Medaille d'Or	22-May	27-Sep				High		150	3.07		
Michelin	19-May	11-Sep		81						160	
Muscadet De Dieppe	20-May	11-Sep			56						
Porter's Perfection	21-May	9-Oct		70	20.0			130			900
Stoke Red	25-May	4-Sep		78		High					960
Sweet Alford	18-May	9-Oct	16.0								
Tolman Sweet	21-May	4-Oct			75						
Tydeman Late Orange	19-May	18-Oct				High	16.7	180	3.10	180	
Yarlington Mill	23-May	9-Oct			56						