ANNUAL REPORT TO NC-140

2014 'Aztec Fuji' Rootstock Trial – Reporting for 2019 data

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 2019 was the sixth year of the 2014 NC-140 Apple Rootstock Trials. Rootstocks included in this experiment are listed below. All data presented in this report were collected in 2019 and analyzed by the data coordinator.

An Excel data template worksheet was provided to all cooperators to submit data. This generally worked well, however there were some data issues at some sites. Please use the Excel data template when submitting data -- a new worksheet template will be provided each year. Participants are encouraged to review their data and make sure that all measurements are in the units requested. Include only those data requested in the protocol – which is provided in addition to the data template.

Summary of Data Submission for 2020
1. Review the data protocol located on the NC-140 website
2. Be sure to correct any errors in the data structure (treatments, reps) communicated by the data coordinator to you in 2020.
3. Submit only the data requested using the Excel data template worksheet, which can be found on the NC-140 website
4. Submit only data collected in **2020** (not prior years) and use the correct units using the data template provided for 2020 (see the NC140.org website).

NC 140 Accomplishments Report Statement

2014 NC-140 Apple Rootstock Planting – 'Aztec Fuji'

The 2014 Apple rootstock (Fuji) planting was established in 7 locations in the United States (AL, ID, GA, NJ, NY, PA, SC, UT), and in Ontario, Canada http://bit.ly/1zv3wCc). The trial consists of the following rootstocks: B.10, G.11, G.202, G.214, G.30, G.41, G.935, G.969, M.26 EMLA, M.9 T337, V.1, V.5, V.6, and V.7. Trial coordination and data analyses are being coordinated by John Cline. Trees were planted to a 'tall spindle' systems at a 5 x13 ft spacing. Trees are planted in a completely randomized design with single trees serving as experimental units. There are 10 replicates of each treatment. Each site selected their own pollinizer varieties. The trees were propagated by Willow Drive Nursery, WA and planted in the spring of 2014.

Data protocols have been established for 2014-2019 and data that was collected is summarized below.

Measurement	2014	2015	2016	2017	2018	2019	2020
1) initial trunk diameter measured at planting 30cm above graft union	X						
2) number of side branches >10 cm at planting	X						
3) trunk circumference in the fall	X	X	X	X	X	X	X
4) height of the graft union above soil;	X						
5) tree status at the end of the growing season	X	X	X	X	X	X	X
6) date of full bloom		X	X	X	X	X	X
7) date of harvest		X	X	X	X	X	X
8) total yield per tree		X	X	X	X	X	X
9) flower clusters per tree	X						
10) total number of fruit per tree		X	X	X	X	X	X
11) total number of rootstock suckers per tree		X	X	X	X	X	X
12) tree height in the fall					X		
13) tree spread in the fall (in-row and perpendicular to the row)					X		

2019 Data Analyses and 5-year Manuscript

I have completed analyses for data submitted in 2019. I have not included the results in this report, but have started writing the manuscript for submission to the Journal of the American Pomological Society. I intend to have a draft ready early in 2021. I regret that I have not been able to complete the draft sooner. If you would like a copy of the data tables, please contact me at jcline@uoguelph.ca.