

Editorial

A BIG Thank You to All Our Field Trial Hosts

Some of the most memorable moments in my 15-year career breeding apple rootstocks have occurred when I was walking the rows with apple growers that accepted to host a field trial of Geneva® rootstocks on their farm. For me, the visits have been amazing learning experiences, where I was being taught, by some of the best and most experienced orchardists in the world, how they raised their orchards to best serve their customers the best possible experience when biting into an apple. The visits also gave me an opportunity to learn about the challenges they face: labor issues, new challenging varieties, suckers on M.7 (the weed), fire blight with M.9, viruses issued with new scion sport mutations on G.935, and many, many more. It is because of those challenges that I consider apple growers (and other fruit growers) some of the bravest and most entrepreneurial people in the world.

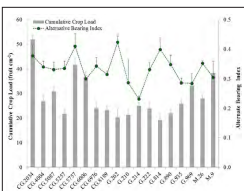
The ability to see our rootstocks perform in your orchards enhances my perspective as a plant breeder and allows me to adjust the breeding priorities. For example, among the many traits that we evaluate and select in the breeding program is one that I had sort of placed on the back burner: suckering in the orchard. It went on the back burner because, in the stool bed, nursery suckering is very much desired: more suckers = more liners = more money, and the nurseries had been begging for something much easier than G.41 (no suckers, no burr knots) to propagate. However, in the recent past, I was on a farm that had a lot of M.7 rootstocks – you know they sucker a lot – after pressing the grower for some estimates, it was revelatory how much labor (and money) it took to deal with them, and to think that can all be solved with the right rootstock – I learned that a “sucker-less” rootstock can save hundreds of dollars per acre in

the life of that orchard. On another recent visit to one of my favorite growers, I was observing burr knot formations on M.9 and how they likely became entry points for borers and fire blight that caused the trees to decline – and yes, burr knots are desired by the nurseries too, but I see the value of selecting against their presence in apple rootstocks. Fortunately, for the most part, rootstock nurseries have learned to work with poor rooting rootstocks that lack burr knots through research that was performed at Cornell several years ago – but they still complain.

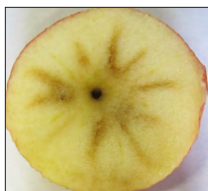
I am also grateful for the fruit samples that we are able to pick from the NY trials to measure yield, fruit quality and mineral nutrient concentration. With some support from NY-ARDP in the past few years, we have been able to determine the rootstock’s potential to modulate mineral nutrient concentration, and are beginning to come up with recommendations for certain rootstocks. For example, G.41 is consistently a high potassium-phosphorous rootstock, and average calcium – which means that, with a calcium-challenged apple like Honeycrisp, growers need to slow down with potassium fertilizers to avoid bitter pit. In other growers’ field trials, we were able to observe G.814’s ability to increase Gala fruit size consistently by a box size.

The program has had challenges, such as mix-ups, weak graft union combinations, new virus exposures, etc.; but we have also enjoyed very good successes – some of the best days have been when a grower shares with me the fact that their business could not exist without the fire blight resistance that our rootstocks provide. With every new field trial that you host, we learn of new strengths and weaknesses

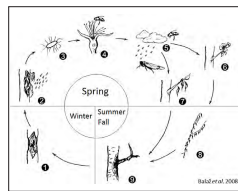
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of the Geneva® rootstocks and how they interact with new scion varieties that you chose. I have seen some awesome scion-rootstock combinations. Hopefully, these field trials are also useful to you, as you come to experience new rootstock technologies on your farms and test their potential to make your orchards more profitable.

Thank you,
Gennaro Fazio
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FALL 2017 • VOLUME 25 • NUMBER 3

This publication is a joint effort of the New York State Horticultural Society, Cornell University's New York State Agricultural Experiment Station at Geneva, the New York State Apple Research and Development Program, Michigan Apple Committee, and the NYSBGA.

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