

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.

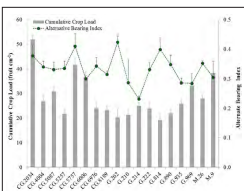
The ability to see our rootstocks perform in your orchards enhances my perspective as a plant breeder and allows me to adjust the breeding priorities. For example, among the many traits that we evaluate and select in the breeding program is one that I had sort of placed on the back burner: suckering 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.

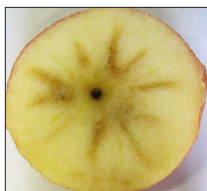
I am also grateful for the fruit samples that we are able to pick from the NY trials to measure yield, fruit quality and mineral nutrient concentration. With some support from NY-ARDP in the past few years, we have been able to determine the rootstock’s potential to modulate mineral nutrient concentration, 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

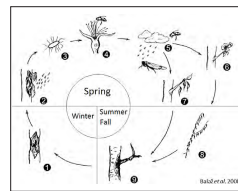
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NEW YORK STATE HORTICULTURAL SOCIETY

- President** **Ned Morgan**, Morgan Farms LLC
3131 Pigeon Hill Road, Marion, NY 14505
Cell: 585-752-9771; FAX: (315) 926-7740
email: emorgan11@rochester.rr.com
- Vice President** **Ted Furber**, Cherry Lawn Farms
8130 Glover Road, Sodus, NY 14551
PH: 315-483-8529; FAX: 315-483-6408
Cell: (315) 573-4046
e-mail: atfurber@yahoo.com
- Treasurer/Sec.** **Ward Dobbins**, H.H. Dobbins & Son
99 West Ave., PO Box 503, Lyndonville, NY 14098
PH: (585) 765-2271; FAX: (585) 765-9710
Cell: (716) 622-6636
e-mail: wdobbins@wnyapples.com
- Executive Director** **Paul Baker**
3568 Saunders Settlement Rd., Sanborn, NY 14132
FAX: (716) 219-4089; Cell: (716) 807-6827
e-mail: pbaker.hort@roadrunner.com
- Office Admin.** **Karen Wilson**
630 W. North St., Geneva, NY 14456
PH: (315) 787-2404 (W); FAX: (315) 787-2216
Cell: (315) 521-0852
e-mail: wilsonk36@hotmail.com
- Cornell Director** **Dr. Art Agnello**, NYSAES, Department of Entomology
630 W. North St. Geneva, NY 14456
PH: (315) 787-2341 (W); FAX: (315) 787-2326
Cell: (315) 719-4623
e-mail: ama4@cornell.edu
- Director** **Dan Sievert**, Lakeview Orchards, Inc.
4941 Lake Rd., Burt, NY 14028
PH: (716) 778-7491 (W); FAX: (716) 778-7466
CELL: (716) 870-8968
e-mail: lvorchards@hotmail.com
- Director** **John Ivison**, Helena Chemical Company
165 Platt St., Suite 100, Albion, NY 14411
PH: (585) 589-4195 (W); FAX: (585) 589-0257
Cell: (585) 509-2262
e-mail: ivisonj@helenachemical.com
- Director** **Alisha Albinder**, Hudons River Fruit Distributors
65 Old Indian Road, PO Box 246, Milton, NY 12547
PH: (845) 795-2121; FAX: (845) 795-2618
Cell: (845) 518-3962
e-mail: alisha@hudsonriverfruit.com
- Director** **Randy Hart**, Hart Apple Farms, LLC
2301 Rt. 22, Peru, NY 12972
Cell: (518) 524-5366
e-mail: randy.hart1@gmail.com
- Director** **Elizabeth Madison**
5812 Middle Road, Sodus, NY 14551
PH: (315) 483-6155
e-mail: emadison1234@gmail.com
- Director** **Brett Kast**, Kast Farms, Inc.
2911 Densmore Road, Albion, NY 14411
PH: (585) 589-9557
e-mail: Brett.Kast@gmail.com
- Director** **Joel Crist**, Crist Bros. Orchards
65 Crist Lane, Walden, NY 12586
PH: (585) 778-7424 Cell: (845) 629-0761
e-mail: joel@cristapples.com
- Director** **Richard Breslawski**, Charles Breslawski Farm
501 Priem Rd., Hamlin, NY 14464
Cell: (585) 831-0643
e-mail: richih1256@hotmail.com

APPLE RESEARCH & DEVELOPMENT PROGRAM ADVISORY BOARD

- Chairman** **Walt Blackler**, Apple Acres
4633 Cherry Valley Tpk. Lafayette, NY 13084
PH: 315-677-5144 (W); 315-729-3728 (C)
wblackler@gmail.com
- Alan Buhr**, New Royal Farms
7577 Slayton Settlement Road, Gasport, NY 14067
PH/FX: 716.772.2469; greenapple47@juno.com
- Steve Clarke**, Sunshine Orchards
40 Clarkes Lane, Milton, NY 12547
PH: 845-795-2383; 845-901-7440(C); FX: 845-795-2383
apelsteve@hvi.net
- Robert Deemer**, Dr. Pepper/Snapple Group
4363 Rte.104
Williamson, NY 14589
PH: 315.589.4911 ext. 713; FX: 315-589-8048
bob.deemer@dpsg.com
- Mason Forrence**, Forrence Orchards
2740 Route 22, Peru, NY 12972
PH: 518-643-9527; 518-726-6074 (C); FX: 518-643-9509
gaylewager@yahoo.com
- Ted Furber**, Cherry Lawn Farms
8099 Glover Rd., Sodus, NY 14551
PH: 315-483-9221; 315-573-4046 (C); FX: 315-483-6408
atfurber@yahoo.com
- Mark McMullen**, Marketing Order Administrator
NY State Dept. of Agriculture & Markets
10B Airline Drive, Albany, NY 12235
PH: 518-485-2014; FX: 518-457-2716
mark.mcmullen@agriculture.ny.gov
- Jeff Smith**, Ledge Rock Farms LLC
4362 South Gravel Road, Medina, NY 14103
PH: 585-798-3831
jsmith24@rochester.rr.com
- Peter Ten Eyck**, Indian Ladder Farms
342 Altamont-Voorheesville Road
Altamont, NY 12009
PH: 518-765-2956; 518-698-6258 (C); FX: 518-765-2700
Peter@indianladderfarms.com

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- Chair** **Tony Blattner**
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- Vice Chair** **Mark Youngquist**
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Michigan Apple Committee
13750 S. Sedona Parkway, Suite 3
Lansing, MI 48906
Ph. 800.456.2753 Fax 517.669.9506



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
USDA ARS Plant Genetic Resources Unit
Geneva

NYS BERRY GROWERS BOARD MEMBERS

- Chair** **Dale Riggs**, Stonewall Hill Farm
15370 NY Rt 22, Stephentown, NY 12168
PH: 518-733-6772; stonewallhill@taconic.net
- Treasurer** **Tony Emmi**, Emmi Farms
1572 S. Ivy Trail, Baldwinsville, NY 13027
PH: 315-374-3577; emmifarms@aol.com
- Executive Secretary** **Paul Baker**
3568 Saunders Settlement Rd., Sanborn, NY 14132
CELL: 716-807-6827; FAX: (716) 219-4089
pbaker.hort@roadrunner.com
- Bruce Carson**, Carson's Bloomin' Berries
2328 Reed Rd.
Bergen, NY 14416
PH: 585-494-1187; bcarson1@frontiernet.net
- John Cashin**, Cashin Farm
225 Argersinger Road, Fultonville, New York 12072
PH: 518-281-6000; cashinsfarm.com
- Amey MacHamer**, Hurd Orchards
17260 Ridge Rd., Holley, NY 14470
- Elizabeth Madison**
5812 Middle Road, Sodus, NY 14551
PH: (315) 483-6155; emadison1234@gmail.com
- Terry Mosher**, Mosher Farms
RD #1 Box 69, Bouckville, NY 13310
PH: 315-893-7173; tmosher@diracway.com
- Chuck Mead**, Mead Orchards LLC
15 Scism Rd., Tivoli, NY 12583
PH: 845-756-5641 (W); CELL: 845-389-0731
chuck@meadorchards.com

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.

- Editor** **Dr. Art Agnello**
Dept. of Entomology
New York State Agricultural Experiment Station
Geneva, NY 14456
PH: 315-787-2341; FX: 315-787-2326
CELL: 315-719-4623
ama4@cornell.edu
- Subscriptions & Advertising** **Karen Wilson**
NYSHS, 630 W. North St., Geneva, NY 14456
PH: 315-787-2404; FAX: 315) 787-2216
wilsonk36@hotmail.com
- Design** **Elaine L. Gotham**
Gotham City Design, Naples, NY
PH: 585-374-9585; elg2@cornell.edu
- Production** **Gemma Osborne**
CALSA Communications
NYSAES, Geneva, NY
PH: 315-787-2248; gro2@cornell.edu