

Editorial

So What Have You Done For Me Today?

That is a reasonable question for a member of the tree fruit industry or a taxpayer to ask of a publicly funded institution such as the USDA-ARS-Appalachian Fruit Research Station (AFRS). What we have done is to think and plan for the future. So what does that do to help you today? Well it's what we did 29 years ago when our laboratory opened and the results are what we have today. When AFRS started its work in 1979, we looked to the future problems of the industry and asked, "What are the 'inevitable' problems to be addressed?" In 1979, labor was not a critical issue, in fact "Hard Tomatoes, Hard Times" was still resonating through the agricultural community. Labor-saving mechanization was neither politically correct nor a great industry need, but it was inevitable that labor would be a critical need sometime in the future so AFRS worked to develop technology that would be on the shelf when the time came for its need. Today that technology is coming off the shelf in the form of sweet cherry, citrus, and blueberry harvesting machinery, harvest-aide platforms, mechanical thinning machines and bin filling technology. Furthermore, the plant architecture and training systems to marry the machine with the tree were needed to accommodate mechanization. Since breeding programs have a 20-30 year timeline, plans were made to develop the cultivars of the future. Today, peach cultivars have been released with

upright ('Sweet-N-UP') and pillar ('Crimson Rocket') architectures that have a narrow and exposed fruit-bearing surface that facilitates mechanical thinning and harvesting as well as ease of hand thinning and harvesting.

In 1979 Plum pox or Sharka virus (PPV) was not present in North America, it was a European problem, but it was inevitable that global trade would someday introduce it to the U.S. Before Plum Pox ever reached the shores of the U.S., AFRS scientists led an international team to developed genetic resistant plum germplasm in anticipation of this devastating disease. Since Plum pox entered the U.S., AFRS scientists have continued with the development of resistant germplasm and expect to have release approval within the year of a plum pox-resistant plum cultivar ('HoneySweet') developed through genetic engineering.

In 1979 the home or business computer was a rare fixture but it was inevitable that computers would play a key role in all aspects of agriculture. AFRS scientists teamed with the University of Maryland to take the accumulated knowledge of how and when fire blight infection occurs and to build a 'computer program' named MaryBlyt to predict infection periods. MaryBlyt has been a key tool in managing fire blight throughout the U.S. and the world.

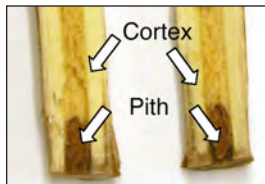
In 1979 the 'organic movement' was a tiny, tiny blip on the radar screen of the American consumer and the commercial

food production system of the U.S. However, with the increased interest of American consumer in food production systems with reduced or no dependence on toxic pesticides, AFRS scientists took-up the challenge of using natural organisms to control damaging disease microbes. AFRS developed the first bio-fungicides (Aspire, Bio-coat, Biocure and BioSave) for the commercial horticultural market and later generations of this technology are now commercially available throughout the world. Non-toxic insect repellants based on kaolin clay were developed (Surround WP) and are now used worldwide in both organic and traditional sustainable horticultural productions systems.

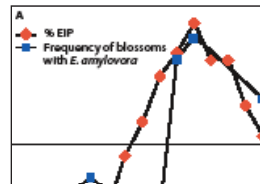
In 1979, soil erosion with its nutrient and sediment pollution of waterways was a serious concern for agriculture, in general, but of minor concern in tree fruit production due to the small acreages and inherent design of orchards that reduced overland flow of runoff; yet recently there is interest in production systems that conserve soil organic matter and soil carbon because these are the backbone of soil fertility and the long-term sustainability of agriculture. Some of the first field studies at AFRS lead to the development of soil management and cover crop systems that not only preserved or increased soil organic matter, now termed carbon sequestration, but increased the
(Continued on p.2)



3



11



17



23



27

Contents

3 Rapid Application of SmartFresh™ (1-MCP) to Apples After Harvest is More Important Than Rapid CA

Chris Watkins, Jacqueline Nock and Hannah James

11 Currant Cane Dieback in NY – Preliminary Data From the Hudson Valley Trial

Kerik Cox, Tiffany Jamann and Steven Alan McKay

17 Blossom Blight Epidemiology

M.M. Dewdney and H.S. Aldwinckle

23 Hudson Valley Stink Bug Management

P. J. Jentsch

27 Improving Cherry Fruit Size of Self-Fertile Cultivars in NY Orchards

Gabino H. Reginato, Terence L. Robinson and Tae-Myung Yoon

COVER: Gala apple harvest at the Geneva Experiment Station of Cornell University. (Photo by Joe Ogradnick)

2008 NEW YORK STATE HORTICULTURAL SOCIETY

AND SOCIETY OF APPL. SCI. 1895

- President** **Walt Blackler**, Apple Acres
4633 Cherry Valley Tpk. Lafayette, NY 13084
PH: 315-677-5144 (W); FAX: 315-677-5143
wblackler@gmail.com
- Vice President** **Peter Barton**
55 Apple Tree Lane, Paughquag, NY 12570
PH: 845-227-2306 (W); 845-227-7149 (H)
FX: 845-227-1466; CELL: 845-656-5217
pbarton@bestweb.net
- Treasurer/Secretary** **Bruce Kirby**, Little Lake Farm
3120 Densmore Road Albion, NY 14411
PH: 585-589-1922; FAX: 585-589-7872
bruce.kirby@hughes.net
- Executive Director** **Paul Baker**
665 Sara Court, Lewiston, NY 14092
PH: 716-754-4414 (W); FAX: 716-754-4424
CELL: 716-807-6827; pbaker.hort@roadrunner.com
- Admin Assistant** **Karen Wilson**
630 W. North St., Geneva, NY 14456
PH: 315-787-2404; FX: 315) 787-2216
CELL: 315-521-0852; wilsonk36@hotmail.com
- Cornell Director** **Dr. Terence Robinson**, NYSAES
630 W. North Street
Hedrick Hall, Room 125, Geneva, NY 14456
PH: 315-787-2227; FX: 315-787-2216
CELL: 315-521-0435; tlr1@cornell.edu
- Director** **Jim Bittner**, Singer Farms
6620 Eastt Lake Rd., Appleton, NY 14008
PH: 716-778-7330 (W); 716-778-7630 (H)
FX: 716-778-7330; CELL: 716-417-3173;
WINERY: 716-778-7001
jim@singerfarms.com
- Director** **Roderick Dressel, Jr.**, Dressel Farms
271 Rt 208, New Paltz, NY 12561
PH: 845-255-0693 (W); 845-255-7717 (H)
FX: 845-255-1596; CELL: 845-399-6767
rdresselj@comcast.net
- Director** **Robert DeBads**, Lake Breeze Fruit Farm
6272 Lake Road, Sodus, NY 14551
PH: 315-483-0910 (W), 315-483-9904 (H)
FX: 315-483-8863; CELL: 585-739-1590
bobdebads@aol.com; (Summer – use FAX only)
- Director** **Tom DeMarree**, DeMarree Fruit Farm
7654 Townline Rd.
Williamson, NY 14589
PH: 315-589-9698; FX: 315-589-4965
CELL: 315-576-1244; demarreeff@aol.com
- Director** **Doug Fox**, D&L Ventures LLC
4959 Fish Farm Rd., Sodus, NY 14551
PH: 315-483-4556; FX: 315-483-6025
dfox12@hughes.net
- Director** **William R. Gunnison**
P.O. Box 276, Crown Point, NY 12928
PH: 518-597-3363 (W); 518-597-3817(H)
FX: 518-597-9617; CELL: (518) 769-9905
crownmac@yahoo.com
- Director** **John Ivison**, Helena Chemical Co.
165 S. Platt St, Suite 100
Albion, NY 14411; PH: 585-589-4195 (W)
FX: 585-589-0257; CELL: 585-509-2262
ivisonj@helenachemical.com
- Director** **Chuck Mead**, Mead Orchards LLC
15 Scism Rd., Tivoli, NY 12583
PH: 845-756-5641 (W); CELL: 845-389-0731
FAX: 845-756-4008
meadorchards@yahoo.com

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: 315-638-7679; emmifarms@aol.com
- Executive Secretary** **Paul Baker**
665 Sara Court, Lewiston, NY 14092
PH: 716-754-4414 (W); FAX: 716-754-4424
CELL: 716-807-6827; pbaker.hort@roadrunner.com
- Jim Bauman**, Bauman Farms
1340 Five Mile Line Rd., Webster, NY 14580
PH: 585-671-5857
- Bob Brown III**, Brown's Berry Patch
14264 Roosevelt Highway, Waterport, NY 14571
PH: 585-682-5569
- Bruce Carson**, Carson's Bloomin' Berries
2328 Reed Rd.
Bergen, NY 14416
PH: 585-494-1187; bcarson1@frontiernet.net
- Jim Coulter**, Coulter Farms
3871 N. Ridge Road, Lockport, NY 14094
PH: 716-433-5335; coulterfarms@aol.com
- John Hand**, Hand Melon Farm
533 Wilber Ave., Greenwich, NY 12834
PH: 518-692-2376; handfarm@yahoo.com
- Craig Michaloski**, Green Acres Farm
3480 Latta Road, Rochester, NY 14612
PH: 585-225-6147; ckmich83@rochester.rr.com
- Terry Mosher**, Mosher Farms
RD #1 Box 69, Bouckville, NY 13310
PH: 315-893-7173; tmosher@direcway.com
- Greg Spoth**, Greg's U-Pick
9270 Lapp Rd., Clarence Center, NY 14032
PH: 716-742-4239; gregsupickfarm@aol.com
- Alan Tomion**, Tomion Farms
3024 Ferguson Corners Rd., Penn Yan, NY 14527
PH: 585-526-5852; atomion@frontiernet.net
- Tony Weis**, Weiss Farms
7828 East Eden Road, Eden, NY 14057
PH: 716-992-9619; tonyweiss@msn.com

NEW YORK
Fruit Quarterly

FALL 2008 • VOLUME 16 • 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, and the NYSBGA.

Editors Terence Robinson and Steve Hoying
Dept. of Horticultural Sciences
New York State Agricultural Experiment Station
Geneva, New York 14456-0462
PH: 315-787-2227; FX: 315-787-2216
tlr1@cornell.edu
sah19@cornell.edu

Subscriptions & Advertising **Karen Wilson**
NYSHS, 630 W. North St., Geneva, NY 14456
PH: 315-787-2404; wilsonk36@hotmail.com

Design & Production **Communications Services, NYSAES, Geneva, NY**
PH: 315-787-2248; gro2@cornell.edu

(Editorial, cont.)

biodiversity of habitats in the orchard to increase the populations of beneficial insects and organisms. This was, and always will be, simply good stewardship of the land. As the concepts of 'carbon credits' moves forward, these carbon sequestering technologies will have additional economic benefit for the tree fruit industry.

So what have we done for the industry today? Today, we look to the future and its problems through the lens of terms such as genomics, computer vision, global warming, genetic engineering, and water use efficiency. With the new technological tools that have been developed since 1979, we stand prepared to meet the needs of global competition, diminishing land resources and increased demand for high quality, nutritious fruit. In another two decades we will look back and determine how well we anticipated the problems, but based on our track record, we will meet these challenges.

D. Michael Glenn
Plant Physiologist/Research
Leader and Director
USDA-ARS-Appalachian Fruit
Research Station
Kearneysville, WV 25430
michael.glenn@ars.usda.gov

APPLE RESEARCH & DEVELOPMENT PROGRAM ADVISORY BOARD 2008

Chairman **Walt Blackler**, Apple Acres
4633 Cherry Valley Tpk. Lafayette, NY 13084
PH: 315-677-5144 (W); FAX: 315-677-5143
wblackler@gmail.com

Alan Burr
7577 Slayton Settlement Road, Gasport, NY 14067
PH: 585-772-2469; greenapple47@juno.com

Steve Clarke
40 Clarkes Lane, Milton, NY 12547
PH: 845-795-2383; apelsteve@hvi.net

Rod Farrow
3031 Densmore Road, Albion, NY 14411
PH: 585-589-7022

Mason Forrence
2740 Route 22, Peru, NY 12972
PH: 518-643-9527; forrencej@gowestel.com

Ted Furber, Cherry Lawn Farms
8099 Glover Rd., Sodus, NY 14551
PH: 315-483-8529

Dan McCarthy
NY State Dept. of Agriculture & Markets
10B Airline Drive, Albany, NY 12235
PH: 518-457-8857; dan.mccarthy@agmkt.state.ny.us

Peter Ten Eyck, Indian Ladder Farms
342 Altamont Road
Altamont, NY 12009
PH: 518-765-2956; pgtell@aol.com

Matt Wells
4363 Route 104, Williamson, NY 14589
PH: 315-589-9695, Ext 314; Matt.Wells@motts.com