Dear Grower,

After 32 years with the NC Cooperative Extension Service, Henderson County, this will be my last Apple Production Newsletter. I will be retiring effective March 1st. This decision was not an easy one. Serving the growers in NC and SC through the Cooperative Extension Service has been my life for over 40 years. It has been an honor and a blessing to have served and worked with you over the years. I hope I have helped, in some small way, to make a positive difference in your life, you certainly have in mine!

I realize it is time to turn the page and watch new Agents step up and blaze their own trail as they try to make positive changes. As the Henderson County Extension Center moves into the future, I am very encouraged by the two outstanding new Agents we have hired, Ms. Karen Blaedow, Commercial Vegetable and Small Fruit Agent and Mr. Steve Pettis, Commercial and Consumer Horticulture Agent. My hope is, these Agents and others that follow will continue the Extension traditions and legacies that were given to me when I first started my career. Helping educate farmers, homeowners and their families to be successful, by using University Research based information.

continued on page 2

Greetings!

My name is Tom Kon and I am the new Southeastern Apple Research Specialist at North Carolina State University (Dr. Steve McArtney’s former position). My position has multi-state responsibilities and will serve the southeastern apple industry (NC, SC, and GA).

I am honored to be a member of the Department of Horticultural Sciences and am based out of the Mountain Horticultural Crops Research and Extension Center in Mills River, NC.

continued on page 2
Prior to moving to the southeast, I spent 7 years as a graduate research assistant working with Dr. Jim Schupp at Penn State University. My research focused on the development and evaluation of crop load management (thinning) strategies for apple. Additionally, I was actively involved in my advisor’s research program, which focused on crop load and canopy management, pruning and training systems, mechanization of orchard practices, rootstock evaluations, pre-harvest drop control, and practices to improve fruit quality. After my work at Penn State was complete, my wife and I made the move to Saluda, NC in late August. We feel very lucky to call western North Carolina our new home!

I’ve had the great pleasure of meeting with some of you over the past few months. I am very grateful for the kindness that has been extended to me during my transition to this position. Every apple grower I’ve met with has stated some version of the following: 1) you’ve got big shoes to fill, 2) please let us know if there is anything that we can do to help, and 3) we welcome you to conduct research on our farm. In short, my transition to this position has been very smooth — thank you for your generosity and support! I am honored to have this opportunity and I look forward to working with you!

Chill Units
Tom Kon

The warm weather has stayed mostly below 60F, so we’re still adding some chill units. Our total is now at 1084. Looking good for a normal bloom this spring. Great news after last year’s prolonged period.

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

As you grow and mature you realize you haven’t achieved your goals alone. I was very fortunate to grow up in Clemson SC, where I grew up in a very loving and supportive family. If you think back, you realize there were people along the way that helped pave your future path.

One of those people, I have never even met. He is A. Francis Leaver who is buried at Clemson University’s historical Cemetery Hill. Mr. Leaver was the co-founder and father of today’s Cooperative Extension Service which recently celebrated its 100 plus years of service.

"The County Agent is to assume leadership in every movement, whatever it may be, the aim of which is better farming, more education, better living, more happiness and greater citizenship". Asbury Francis Leaver, SC Congressman, April 14 1914

I am very encouraged about the future of the NC Cooperative Extension Service. We have true leadership coming from NCSU’s CALS, Dean Richard Linton and NCCES Director, Rich Bonanno. Leadership that I believe will keep Congressman Leaver’s dream alive and strong for the next 100 hundred years and more.

In retirement, I plan to continue to stay active in Henderson County agriculture. In December I signed up at the NRCS office to get my farm number. At the time, Joyce Ramsey said "you are the newest farmer in Henderson County". My hope is... it’s not too late for this "old dog" to learn the newest tricks.

With sincere gratitude and appreciation,
Marvin

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Make sure to check out the inserts for information about the 2017 Winter Apple School (agenda) being held on February 1st and the flyer for the PSC workshop being held on February 2nd.
Cause of Death: Unknown  
By: Sara Villani

Late into the challenging 2016 growing season where we were forced to handle uncharacteristic blooming periods, torrential July downpours, and drought conditions carrying us through harvest, another strange thing happened: apparently healthy young apple trees suddenly started to decline and die. While we first started to investigate the issue at a few orchards in August, by September several growers had identified trees in their young, high-density apple blocks that were also mysteriously declining. Although affected cultivars and rootstocks varied, symptoms of what is now being referred to as rapid apple decline (RAD) were fairly common across the region and include:

- Decline and subsequent death occurs in as little as 2 weeks. Foliage becomes light green/yellow (chlorotic) and often turn red prior to death. Many trees appear to be under water stress based on observed wilting. Commonly, the very early stages of color change are observed at the top of the tree.
- Often a tree will collapse with a full crop of apples.
- In Western NC, 3 to 6 yr old trees planted on dwarfing rootstocks in high-density systems are affected.
- Death/necrosis is observed at the graft union and stops at the root line. In some instances, the line of necrosis appears to be moving upward. Roots on declining trees appear healthy and may produce root suckers.
- The distribution pattern in an orchard block is fairly random. It is not uncommon to observe a single declining tree surrounded by apparently healthy trees.

In regards to RAD, the good news is that we are not alone. Apple growing regions in the Northeast and Mid-Atlantic have also been battling this issue and tree fruit specialists in these states are investigating RAD as well. Dr. Kari Peter at PSU wrote a fantastic extension article reviewing current knowledge on the issue and I encourage you to read it (‘Having RAD is also SAD’, http://extension.psu.edu/plants/tree-fruit/news/2016/having-rad-is-also-sad). The bad news is that no smoking gun has been identified as the cause of RAD. Our collective thoughts are that RAD is due to a combination of abiotic and biotic stresses coming together for the perfect storm. Low chilling hours, harsh cold snaps following dormancy, flooding, and drought (and combinations of these factors) may have predisposed trees to attack by pathogens not commonly problematic in apples. Currently we are working on getting a better handle of RAD in North Carolina. Both Jim Walgenbach’s and my program have been conducting a survey of declining trees and predisposing factors in Western NC. In addition, a proposal is being written to identify and quantify abiotic stressors and determine their impact on apple disease and tree decline in high-density programs. Please stay tuned as we work to provide further answers in the months ahead.

***

Mills River NC Farm School  
1st time this school is being offered in WNC!  
Where: The Mountain Horticultural Crops Research & Extension Center, 455 Research Dr, Mills River, NC 28759

Business Session Dates: February 16th, February 23rd, March 16th, April 20th, May 18th, June 15th, July 20th, August 17th  
Field Day Dates: March 23rd, April 27th, May 25th, June 22nd, July 27th, August 24th  

Cost: $399 per person or $599 per couple  
Includes:  
**Experienced farmers participating in-class with you  
**Shadowing opportunities with farmers in your area  
**Updated small-scale budgets with estimation tools  
**Updated exercises to help teach you business principles  

Don’t miss out sign up NOW! Deadline is February 3rd  
To sign up visit https://ncfarmschool.ces.ncsu.edu/2017-registration/
Important Dates:

February 16th - Winter Grape School, 8am - 5pm at Burntshirt Vineyards, Edneyville, NC. For more details and to register, call 697-4891.

March 9th - Pesticide Re-Certification class - 7pm at the Extension Office in Jackson Park. This class offers 2 "V" credits.

March 16th - Pesticide Re-Certification class - 9am at the Extension Office in Jackson Park. This class offers 2 "V" credits.

Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying any pesticide.

Person with disability and persons with limited English proficiency may request accommodations to participate in programs mentioned in this newsletter, by contacting Marvin Owings at 828 697-4891 or in person at the County Extension Office at least 4 days prior to the event.
2017 Winter Apple School Agenda
February 1, 2017
Blue Ridge Community College
Conference Hall, Hendersonville, NC

7:00 - 8:40  Registration, Coffee & Pastries, Visit Exhibits

8:40 - 8:45  Welcome, Mr. Marvin Owings  
County Extension Director, Henderson County Extension Service

8:45 - 9:00  Welcome, Mr. Tommy Thompson, Commissioner - Henderson  
County Board of Commissioners

9:00 – 9:30  “Disease Management and Control” – Dr. Sara Villani, Plant  
Pathology Dept., NCSU

9:30 - 10:30  “Produce Safety” Dr. Eduard Gutierrez Rodriguez, FBNS Dept. and  
Ines Hanrahan, Washington Tree Fruit Research Commission

10:30 - 10:45  BREAK

10:45 - 11:15  Planting Systems, Cost and Orchard Labor Mechanization Options  
Dr. Mike Parker, Hort. Science Dept. NCSU

11:15 - 11:40  “NCCES Update” & Q/A Dr. Rich Bonnano, NC Cooperative  
Extension Service, Director of Extension

11:40 - 12:00  BRAG in Review, Awards & Election of Officers & Directors

12:00 - 1:15  Sponsored Lunch / Visit Vendors

1:15 - 2:00  “Marketing Apples and Apple Products” Ms. Debbie Hamrick,  
Specialty Crops Director, NC Farm Bureau Federation

2:00 - 2:30  “Pollination and Fruit Set” Dr. Tom Kon, Hort. Science Dept. NCSU

2:30 - 3:00  “Your Local NEWA Weather Station Pest Forecast” Mr. Trey Enloe,  
Manager, Lewis Creek Farms

3:00 - 3:15  BREAK

3:15 – 3:45  “2016 Insect Pest, ID and Recommendations” Dr. Jim Walgenbach,  
Entomology Dept. NCSU

3:45 – 4:15  “The Effects of Urea on the Overwintering and Development of  
Glomerella Leaf Spot, Brianna Hoge, Plant Pathology Dept., NCSU

Owings, Moderator Specialist Panel Discussion
Produce Safety Alliance Grower Training

Locations: Hendersonville, NC, Winter Apple School Meeting

PSA Grower Training Course satisfies the FSMA Produce Safety Rule requirement outlined in section §112.22 (c). This section indicates: “At least one supervisor or responsible party for your farm must have successfully completed food safety training at least equivalent to that received under a standardized curriculum recognized as adequate by the Food and Drug Administration”.

Workshop Description
In this 1-day course trainers will spend approximately 8.5 hours of instruction covering topics specific to the produce safety rule. They will provide farmers with additional information and hands-on activities to support their understanding and implementation of this regulation.

Target Audience
Apple growers seeking to meet the Food Safety Modernization Act (FSMA) Produce Safety Rule, Good Agricultural Practices (GAPs), and co-management of natural resources and food safety. This workshop targets large Apple Growers making more than $500,000 in annual apple sales.

Workshop Schedule
7:30am: Registration and refreshments.
8:00am: Introduction to the Course.
8:15am: Module 1: Produce Safety.
9:00am: Module 2: Worker, Health, Hygiene and Training.
10:00am: Break.
10:15am: Module 3: Soil Amendments.
11:00am: Module 4: Wildlife, Domesticated Animals and Land Use.
12:00am: Lunch.
12:45am: Module 5: Agricultural Water, section 1 Production water
2:00pm: Section 2 Postharvest water
3:15pm: Break
3:30pm: Module 6: Postharvest handling and Sanitation
4:30pm: Module 7: How to develop a Farm food safety plan.
5:30pm: Adjourn

Enrollment Information
Workshop Cost: $250, from this amount $125 is sponsored by the Southern Centers Grant.
GROWER FEE: $125 Registration link: https://commerce.cashnet.com/NCSUCALS?EMCODE=CALS-PSAGTH
Workshop includes course materials, coffee breaks, lunch, and the certificate from AFDO.

Registration is limited to 30 apple growers
Location: County Extension Office, Hendersonville, NC; Phone: 828-697-4891.
Contact: Marvin Owings.
Schedule: 7:30 am to 5:30 pm.
Additional information please contact: egutier2@ncsu.edu or call 919-515-2953.

Additional Information
Instructors
- Eduardo Gutierrez Rodriguez, NC State University.
- Marcos Sanchez, Texas Tech University.
- Elena Toro, NC Sate University
- Laura Strawn, Virginia Tech