Cornell University Cooperative Extension

Eastern NY Commercial Horticulture Program

Vol. 4 Issue 3
May 25, 2016

Tree Fruit News

Continuing Scab and Rust Protection Program for 2016,

Dr. Srdjan Acimovic, Cornell HV Lab

Consequences of this season's apple scab infection periods

As you know the models have indicated clearly that the two major infection periods happened from May 1-8. If the protective sprays before this period and/or curative sprays with Inspire Super just after it were NOT done successfully, we should be finding first scab symptoms on leaves roughly 10 -14 days after these infections (depending on the weather). However, as Dave Rosenberger indicated in Scaffolds from May 16, in our HVRL unsprayed check with Jersey Mac trees we have seen sheet scab showing now on few fruits. This is odd since there was no scab detected on spur leaves around these scabby fruit.

Secondary apple scab lesions on Jersey Mac. *Photo by Dr. Srdjan Acimovic*

In the literature, successfully overwintering conidia cuddled under the scales of buds formed in the previous season are rare for apple scab fungus *Venturia inaequalis*. To support what Dave said, this should not be happening in your orchards - since you are skillful growers with a lot of experience and you probably have had well timed scab sprays last year and these scabby fruit should be NOT be showing up in your orchards. Always bear in mind that whatever you do this season in your orchard, plant protection-wise (not only horticultural-wise), it will always have impact on the next season infection pressures. Finally, RIMpro is a promising and complex model for scab prediction and so far it was useful to us, even though it is new and will take time to be validated fully with confidence. If you have access to it it will help you time your sprays well in conjunction with your experience, gut-feel, weather forecasts, and other models you have at hand.

What to watch for in the coming weeks

So what are we up against in the coming weeks? First, keep using multiple weather forecasts available online - not only one. For Highland, NY, May 18th and 19th the NEWA model was predicting that on May 19 May 21 there would be new scab infection periods. It puzzles me why the NEWA model was predicting scab infections with red flag for May 19th with only 15% chance of rain (WeatherChannel.com)? Probably other weather forecast models feeding into the NEWA's scab model are more conservative so they predict higher chance for rain/ random showers to occur on May 19. So keep an eye on showers at your specific location and decide to spray according to those events. Next, what can you do if you see scab symptoms? You cannot use dodine (Syllit), as we are way past pink in Hudson Valley. You can do a tank mix of captan and some of the QoI fungicides (consider adding some sulfur for mildew susceptible varieties if it is NOT going to be too hot). What will happen if you had infections that actually took-off in between your sprays, you will get dead spots on the leaves after this spray. Those dead spots is where infections have been killed by the fungicide. However, this will not kill ALL the established infections if

continued on next page

Temperature and Rain 4/19/16 - 5/23/16

Locations	Avg Temp (F)	Max Temp (F)	Min Temp (F)	Total Rain (in)
Chazy	49.8	80	22.7	2.08
Peru	50.5	79.1	23.9	1.5
Crown Point	50.7	80.9	23.9	0.56
Clifton Park	53.9	82.9	32.9	2.46
Hudson	54.4	82.9	33.6	4.65
Highland HVRL	55.5	80.6	37.9	5.44
Marlboro	54.3	79.3	34.9	3.4
Riverhead	52.3	71.1	35.6	2.95

previous sprays were not timely. So some conidia-driven secondary infections can take place. Another option is using Merivon (SDHI fungicide fluxapyroxad and a QoI pyraclostrobin). However, if you have done all your sprays timely, as indicated above, you would not need to worry about these infections becoming visible symptoms. If you do see symptoms - then that's a tough one and it will get problematic what to do for coming sprays. You should have had done all your sprays timely for major primary scab infections May1-8 and not worry now. Rust has just started showing it's spots in our untreated checks here at HVRL and I hope you took care of those with your timely scab sprays as well. If you had severe fire blight last year keeping you concerned now - NEWA predicted a high risk for fire blight infection on May 23. So if you have rat-tail flowers or still some left-over late opened flowers it might be wise to do a spray - average daily temperatures will increase.

Stay alert and consider summer diseases

So stay on top of things (do not relax) - even the predicted remaining 6.5-12% ascospores based on RIMpro model (which you should take with a grain of salt depending on knowing your location best and due to novelty of RIMpro) can lead to messy infection period(s) with any coming rain (s). So keep doing your sprays before rain events and/or just right after them. We are not yet done with the scab season. At this time, even though it is a bit early, I wish to remind you that for susceptible and especially late ripening varieties it is essential to start thinking about how to successfully deal with summer diseases, i.e. with Sooty blotch and Flyspeck. Do not forget that most of the times you need minimum two sprays (not one at the end of Aug.) to control this nuisance well on late ripening varieties (always check PHI for fungicides you wish to use). Pristine is something you all know is a good choice. At HVRL, we plan on testing some new options in 2016 for these fungi and if you wish to help us by providing a test plot in your orchard where you had an outbreak of Sooty blotch or Flyspeck last year - let me know. It would be a perfect chance for you to see first hand how those options pan out.

Interview with Dr. Greg Peck: Our Newest Addition to the Faculty of the Horticulture Section, Cornell University School of Integrative Plant Science

Interview conducted by Anna Wallis, ENYCHP

Greg, thank you for agreeing to be interviewed for our Eastern New York Commercial Horticulture Program newsletter, *Tree Fruit News,* and welcome to Cornell! Eastern New York fruit growers are very excited to have you on board, and are curious about your experience, programs and plans for the future.

Dr. Greg Peck and his graduate student, Ashley Thompson (Virginia Tech), harvest apple roots from a rootstock X fertilizer experiment in Winchester, VA.

1. Tell us a little about your background, specifically, when and how your interest in horticulture and tree fruit developed.

I became interested in horticulture as an undergrad at the University of Vermont. Although I was majoring in a liberal arts field at the time, I spent my summers working for a commercial landscaper. I also helped pilot a student-run vegetable garden and greenhouse for my dorm. After graduating, and doing a few other things, I realized how much I was interested in agriculture and plants. Since I'm not from a farm family, I sought out training at the University of California-Santa Cruz's Center for Agroecology and Sustainable Food Systems, which runs a six-month, residential apprenticeship program in Ecological Horticulture (http://casfs.ucsc.edu/apprenticeship/). Through this apprenticeship, I gained hands-on experience in growing vegetables, fruit, and cut-flowers. It was here that I became passionate about growing tree-fruit. After graduating from the UCSC apprenticeship, I landed a job with the Sonoma Antique Apple Nursery, an operation that grew and sold more than 100 distinct varieties of heirloom apple trees, among other fruit trees. The nursery was located in Sonoma County—in the heart of the California wine country—and while there, I learned the basics of pome, stone fruit, wine grape, and nursery production. I worked at the nursery for about a year after which I ran a residential landscape business in the San Francisco Bay Area for a few years. By 2002, I was ready for a new challenge, which was to study pomology at a research university. I earned my Master's degree from Washington State University, where I conducted a study comparing organic, integrated, and conventional apple production systems. In 2006, my family and I moved back to my home state of New York to pursue a PhD at Cornell. Similar to my Master's project, my doctoral work compared organic and integrated apple production, but the added challenges faced by Eastern growers made the results of these two studies very different. From 2011 to 2015, I went on to become an assistant professor of horticulture and the tree-fruit horticulture

continued on next page

extension specialist at Virginia Tech. I returned to Cornell in November to start my current position. All the while, my passion for horticulture, and particularly for working with tree-fruit, has continued to grow.

2. *You were recently hired to your current position as Assistant Professor of Horticulture in Cornell University's School of Integrative Plant Science (SIPS). Congratulations! What are your main responsibilities in this new role?*

   Thank you! My official job title is, "Assistant Professor of Sustainable Fruit Production Systems". I have a 60% research and 40% teaching appointment. My research program addresses the challenges of sustainably and profitably producing fruit trees, focused on such projects in soil ecology in high-density orchards, value-added products, such as hard cider, and sustainable management practices and systems. As an instructor, I'll be teaching an introductory pomology class, an advanced fruit-crop physiology class, and, I am especially excited to announce that next spring I will co-teach a new course on hard cider production with a colleague in the Department of Food Science. Although I don't have an official extension appointment, I do enjoy working with growers and have already been involved in about a half dozen extension meetings and workshops since I was hired.

3. *Sustainability has been an emphasis of your research and is a priority of your current program. What does sustainability mean to you?*

   I take a broad approach to defining sustainability. We need to ensure that our existing farmers are able to maintain profitability, but we also need to ensure that our farmland, water, and other natural resources are protected for the long-term and that our human resources are treated fairly with dignity and respect. From these concepts comes the tripartite definition of sustainability that integrates economic, environmental, and social factors. If any one part of the equation is not taken into consideration, then the farm won't be sustainable for the long term.

4. *Specifically, you've spent a lot of time studying soil microbiology. What are the most significant findings you've gathered from this research?*

   The impact of some soil microorganisms, such as pathogens, nitrogen-fixing bacteria, and mycorrhizal fungi have been known for decades but we are just starting to understand the complexity of the soil microbiome. My work looks at how genotypes (e.g., rootstocks) and management (e.g., fertilizers, ground covers, herbicides, etc.) affect the microbial community. The long-term goal of this line of questioning is to develop management strategies that can foster a soil microbiome that more efficiently uses nutrients and reduces pathogens in orchards.

5. *What projects do you have planned for the next couple of seasons?*

   In addition to my work with soil ecology and hard cider, I am developing projects aimed at understanding the impacts of climate change on orchard systems and the ways that growers can help reduce their impact on climate change. This is a new area of research for me, but one that I believe is extremely important. Record-breaking temperatures have been documented monthly and annually on a global and local basis. This past winter, as well as in 2012, are examples of how unusual warm winter temperatures promoted early bud break and increased the risk for spring frost damage. Additionally, climatologists predict that New York will continue to have more erratic and severe weather-related events. These events will be extremely difficult to plan for and have the potential to cost growers a tremendous amount of money in lost yields, trees, infrastructure, etc. so it's important for me to focus on developing this area of research in the next few seasons.

6. *Hard cider production is one of your interests. What work have you done in the past? Do you have plans for future work?*

   I believe diversity is one of the strategies that can be used to obtain greater sustainability. I started conducting research on hard cider, just as the market for cider began to explode. Over the past five years, there has been an 850% increase in US cider sales. To date, New York has 75 cideries—more than any other state in the country. Many of the cider producers want to grow and/or source specialized (typically meaning high tannin) apple varieties. Until recently, cider was only a niche product, so little research had been conducted in the US on cider apples. As a pomologist, my greatest interests are to understand how to produce enough apples to support the expanding industry, and how pre- and post-harvest conditions affect cider quality. My past work has analyzed the cost of production for orchards that grow hard cider apples, and for starting a small-scale cidery. These studies can be found at: http://www.arec.vaes.vt.edu/alson-h-smith/treefruit/horticulture/hard-cider/. I currently have a graduate student who is researching the impact that sunlight and nitrogen have on

continued on next page

cider fruit quality, and later this summer, I will start another graduate student to work on cider-related projects. Last year, I planted a variety trial in Ithaca with what I consider to be the most promising European cider varieties for New York. I also imported new cider-specific crosses from the Long Ashton Research Center in England—these will be available to US growers once they clear quarantine. Additionally, this past winter, I, along with colleagues from various departments on campus and CCE, started a Hard Cider Program Work Team to help us better organize our efforts and resources. We hope to have a Cornell Hard Cider Research and Extension website up and running in the next few months.

7. *After you received your PhD from Cornell University, you took a position as Assistant Professor of Horticulture at Virginia Tech. We're glad to have you back! What are the biggest differences and similarities between the VA and NY industries?*

   The biggest difference is in scale. New York has about four times more apple acreage than Virginia. There are also varietal differences, with some traditional apples, such as York and Winesap and some late season varieties, such as Pink Lady, being more important in Virginia. There is also a greater percentage of the acreage in Virginia being dedicated to processing than in NY. However, similar to New York, the Virginia growers are updating their orchards with Geneva rootstocks and fresh market varieties, and using high-density systems, like the tall spindle.

8. *What do you see as the biggest challenges and most exciting prospects for tree fruit growers in NY?*

   I often say that perennial fruit crops are the most challenging commodities to produce in agriculture. New York growers know how to grow great tree fruit, but a changing climate, as well as rapidly changing markets, regulations, and invasive pests make growing a tough crop that much harder. I think the most exciting area of pomology right now is in the diversification of genetics—for both rootstocks and varieties and the diversification of business models. It's also exciting to see the next generation return to the family farm and/or starting new farm operations. Until recently, very few young people saw farming as a viable career path. I think that's starting to change, which is good for rural communities, and the long term viability of the New York fruit industry.

9. *Do you have anything in common with Gregory Peck, the actor?*

   Our personal lives are certainly very different, but his signature role of Atticus Finch is one of my favorite characters from book or screen. And with a career that lasted more than 50 years, the actor is a great inspiration to me for such career longevity!

10. *What are you looking forward to most?*

    One of the draws for me to come back to Cornell was the opportunity to work with a large interdisciplinary group of tree-fruit researchers and extension specialists. It's great to be a part of a team of smart and dedicated professionals.

Managing Peach Blocks with No Crop

Win Cowgill, Professor Emeritus Rutgers University
Win Enterprises International, LLC

2016 has proven to be a difficult season weather wise, especially for peaches. First the Valentines Day Massacre on Feb14, temperatures reached minus 16 in the Hudson Valley at some locations, minus 8 in northern New Jersey. Similar low temperatures in Massachusetts and Connecticut were observed. Below minus 10 F, most peach buds are gone, minus 8 for many of the white flesh peach varieties from California. The lows in NY and New England took out virtually every peach bud on February 14th, then early warm temperatures hastened bloom in peaches in NJ, PA, VA and moved apple development along as well.

Extreme cold on March 21 and 22 and then again on April 4-6 hurt peaches in Northern NJ, PA and south to Virginia. Some blocks (varieties) are completely gone others have some crop to a partial crop. It is variety by variety, site by site.

The focus of this article is how to manage peach blocks that have 100% crop loss.

Pruning- prune hard and well. This is the time to do any corrective pruning to get trees down to their optimal height and shape. Do the fine pruning to eliminate the small shoots that would not have been able to support a good peach this season. The focus of your pruning is to let adequate sunlight into the canopy to form good pencil size fruit shoots this season for next year and to form strong fruit buds on these same shoots this fall. On an open center vase peach tree, 125 pencil size fruit shoots are optimal. Shaded shoots will be weak and not not be productive next

continued on next page

year. Make sure to remove any and all dead or diseased wood, no matter how small. Dead wood allows disease to enter the scaffolds and trunk.

Summer Prune-This would be the season to definitely summer prune in Mid June to July to keep adequate sunlight into the trees to keep fruiting wood healthy.

Fertility- Reduce your nitrogen fertilization by 50%. My goal is to have 50% of my nitrogen applied as a complete fertilizer, based on soil and leaf tests, three weeks prior to anticipated bloom date. The second half of the nitrogen is applied (as nitrogen only) after shuck split once you know you have a crop, on fruiting blocks. No more additional nitrogen should be applied on non fruiting peach blocks. Note, I do have a peach fertility fact sheet if you wish to request a copy.

Diseases- We are most concerned about the opportunistic fungi. The most important this spring will be Cytospora canker, also know as leucostoma or perennial canker. In the northeast control of this disease is essential if the peach blocks are not to decline prematurely. In North Jersey we can maintain peach blocks for 20 years plus if we manage this disease. The disease can only enter the peach tree (host) by a wound or dead tissue. Cytosopora invades healthy tissue through an injury (pruning wound, peach borer), or dead tissue (winter injury, dead twigs from shade). Controlling peach borers and Oriental Fruit Moth is essential. There are no whole tree sprays to control cytospora canker directly, rather an integrated whole approach is necessary to control it.[1)]

Cytospora management for a no crop season:
-Prune to manage light, remove all dead wood, twigs now. Only prune in dry weather. Prune to promote wide branch angles
-Control Peach Borers, Oriental Fruit Moth-
-Excise cankers on main scaffolds and trunks, back to green tissue, paint the excised cankers with Black Tree Paint containing Topsin M-70 WDG
-Paint the trunks/lower scafflolds every fall with the cheapest exterior white latex paint available as a white wash, 50/50 with H2O to prevent winter and southwest injury.

Brown Rot- with no fruit no sprays are needed.

Rusty Spot – with no fruit infection of fruit is not an issue, adding sulfur in for Peach scab control will control any powdery mildew on the peach foliage.

Peach Scab- it will be important to control this disease even with no fruit in order to limit the buildup of inoculum on the peach twigs. Fungal sporulation begins at pink, according to Dr. Norm Lalancette, Rutgers Extension Fruit Plant Pathologist. Normally Captan fungicide applications begin at Petal Fall and continue through June to prevent scab. He suggests Captan 80 WDG at 2.5 lbs. per acre from petal fall through June. Sulfur is also effective against Scab, same timings but more applications may be needed if washed off by rainfall.

Bacterial Spot Control - Even with no fruit it will be important to limit the buildup of inoculum of bacteria of this disease in the tree. Bacterial spot control can begin with using copper for peach tree Leaf Curl in the fall after leaf drop and in the spring before bud swell. This reduces the bacterial inoculum levels. For controlling bacterial spot on peach fruit, either low rates of copper are used, beginning at petal fall or antibiotics, FireLine and Mycoshield are the two oxytetracycline products available for stone fruit. With no fruit I would not use the antibiotics, they are short lived, rather I would consider using a low rate of copper as in the NJ program.
Dr. Lalancette, Rutgers, worked out a copper program for controlling Bacterial Spot with very low rates of copper on peach. Use this NJ program for controlling the foliar phase of Bacterial Spot this season on blocks with no fruit. His program, 'Copper Bactericides for Peach Bacterial Spot Management' can be found on line at:
http://plant-pest-advisory.rutgers.edu/copper-bactericides-for-peach-bacterial-spot-management/
Insects-There are insects that must be controlled this season, even with no fruit.

Peach Borer Complex- lesser and greater borers, can be controlled with one application of Lorsban 4E applied the first week of September at 1.5 quarts/100 gallons as a trunk spray. We face the registration loss of Lorsban in tree fruit. This would be a good year to learn to use mating disruption for peach borer control in stone fruit. I have used the ISOMATE PTBDual mating disruption ties for over 7 years with 100% success in my research orchards. Make sure to use the labeled rate of ties per acre and get them out on time. CBC(America) is the manufacturer of ISOMATE mating disruption products.

To minimize peach borer infection, make sure to remove all dead wood, and paint the trunks with whitewash to avoid winter injury to trunks.

OFM- Oriental Fruit Moth- will cause flagging on trees and that can provide a site for infection by Cytospora canker. Multiple insecticides are needed for controlling this pest timed with growing degree days. I have used mating disruption ties most effectively on peach and apple for this pest, yes OFM can impact apple. In apple you can use ISOMATE CM/OFM which covers Codling moth and OFM. Note there are many brands of mating disruption products

Win Cowgill *is Professor Emeritus from Rutgers University. He retired April 1, 2016 after 38 years of service. He now owns and operates Win Enterprises International, LLC. A Pomological and horticultural consulting company. He continues to do contract research on tree fruit and work with commercial fruit growers.*
He can be reached at
908-489-1476,
email: wincowgill@mac.com

available. This pest can also build up from year to year if not controlled.

Note: Make sure to follow all state and federal labels when using any pesticide, the label is the law!

References:
(1)Compendium of Stone Fruit Diseases, 1995 APS, Pages 28,29
http://plant-pest-advisory.rutgers.edu/copper-bactericides-for-peach-bacterial-spot-management/

The Mechanics of Precision Thinning: Tips to improve Accuracy and Efficiency Measuring Fruitlets.

Dan Donahue and Sarah Rohwer, ENYCHP

Measuring fruitlets in blossom clusters quickly, accurately, and without damage, or worse, breakage, while balanced on a ladder can be a challenge. The response most often heard from growers when asked *why not try precision thinning?* Is that it is too complicated and takes too much labor effort. Attempts have been made this year and last to modify existing equipment, and test new equipment, and test alternate data input methods to reduce the labor burden.

1. **Calipers get a new pair of "shoes":** The measuring surfaces of stock calipers are very narrow. Consistently positioning the jaws of the caliper on an inconsistently shaped fruitlet is challenging. Last year we epoxied metal angle braces at right angles to the measuring surfaces, increasing the available measuring surface by a factor of 4x. We found it easier to consistently "grab" the fruitlet at its widest point from differing angles of attack. For 2016, we used shaped, pine blocks epoxied to the caliper jaws. The useable measuring surface increased from 3.5 mm to 12.5 mm. The wood blocks were also lighter than he metal brackets utilized in 2015 to the same effect.

The slight loss of ultimate caliper precision is insignificant for our purposes, and a fair tradeoff for easier, less frustrating positioning that is less of a risk to fruit finish.

2. **Using Bluetooth Calipers:** This season we began to use Bluetooth digital calipers from Willowbank Electronics Ltd, product code BTCAL6 www.willowbankelectronics.com. Dr. Poliana Francescatto found these potential labor-savers in New Zealand, and provided extension field staff with units for testing. The Bluetooth-enabled calipers allow measurements to be sent to mobile devices and laptop PC's. The manufacturer makes their own app that is used to record the data on Android phones and allows the data to be stored on the phone locally or sent in the form of a .csv file to any email address. If the calipers are connected to a laptop there is the ability to enter measurements directly into any new or existing Excel spreadsheet. The numbers are transmitted almost instantaneously. The initial hope was that use of the smartphone app would eliminate the need for a second person to manually record data.

Calipers modified with wooden blocks to increase the available measuring surface. *Photo by Dan Donahue*

What we have learned to date:

The Android phone app has not worked reliably for us. In addition, with no way to "mark" the change to the next cluster, it would be necessary to take data sequentially, in perfect order, recording a 0.00 measurement when an expected fruitlet was not actually present. This option never left the Lab. It is our understanding that the development of a custom phone app that would resolve these difficulties is being discussed.

Use of the modified caliper to measure apple fruitlets in a cluster. *Photo by Sarah Rohwer*

Bluetooth pairing with a laptop has been reliable. Since the fruit growth model is an Excel spreadsheet, we were able to input measurement data directly into the model, with the laptop operator moving the cursor to the correct cell at the start of each cluster.

- The Bluetooth method allows the individual working the laptop to compare the incoming data to the previous measurements in real time which can help correct errors that would not have been noticed otherwise.

continued on next page

- The "transmit" button on the caliper is smooth, impossible to find blindly by feel.
- The Bluetooth transfer is fast, but not as fast as conventional voice transfer of the data.

Photo by Dr. Gemma Reig

Results of a simple time study:

We are using precision thinning techniques as part of a broader experiment in a tall spindle orchard. Thirty trees, 15 flower clusters each, were measured by a pair of two person teams in an Ulster County grower orchard. One team was equipped with the modified manual calipers and recorded data to paper, the second using modified Bluetooth calipers recording data directly into the fruit growth model on a laptop. Teams started at opposite ends of a 650' row, and worked towards each other. Once back at the Hudson Valley Lab, data (on paper) were entered, clusters sorted largest to smallest, and the models run. **Here are the results:**

Number of Minutes Required to Measure, Record, and Process Fruitlet Diameter Data for a Single Tree		
	Bluetooth	Non-Bluetooth
Recording Data	6.50	4.10
Entering/Sorting Data	1.25	4.60
Total	7.75	8.70

- Using manual calipers and recording to paper is actually faster in the field. Bluetooth transfer cannot keep up with the speed of a skilled measurer. Time was lost because the transfer button was hit twice due to slow processing, or the occasional unsuccessful transfer. On the bright side, Bluetooth pairing with the laptop was never lost.
- Back at the Lab, the "bluetooth" data needed only to be sorted within each cluster, largest to smallest. The "manual" data needed to be entered and sorted. With manual data entry comes the risk of typographical errors. On the positive side, the manual data could be entered in sorted order on-the-fly as it were, saving mouse clicks. We have begun to use a macro to speed the sorting of clusters significantly, however this time saving technique was not used on the bluetooth data here.
- Once data recording and processing times were combined, use of the bluetooth calipers by a team of two entering data directly into the spreadsheet model showed a productivity improvement of 11%.

Simple improvements could be made to both methods to improve efficiency. Manual measurements could be entered directly into a laptop, with sorting later by macro. The bluetooth team used an SUV as a rolling office, and due to the randomized design of the treatments in the host trial, required time to be spent moving the truck to the next tree. On the other hand, the truck provided a convenient working surface and some shade to make it easier to read the laptop screen. A sophisticated Android/IOS compatible smartphone app might eliminate the need for a second person to record/manage the data stream. Not all apps are reliable performers however, and an app developed for this purpose would have to operate reliably without access to the internet.

The felt circle (in white) makes the transfer button more tactile *Photo by Dan Donahue*

3. **Where is that button?** Our first attempt to use the bluetooth calipers resulted in some frustration with reliably finding the data transfer button on the side of the caliper body. It is a membrane-type switch which provides a tactile sensation when engaged, but a smooth non-descript outer surface. Since the measurer is often holding the calipers at odd angles while balancing on a ladder, multiple attempts to blindly find the button can become frustrating. Our simple solution was to attach a self-adhesive felt pad to the membrane surface. Now the switch was easy to find by feel, and so far has survived 500+ cycles without falling off.

Note: Thank you to Dr. Gemma Reig for her assistance with this report.

Upcoming Events

July 20, 2016 – Cornell Fruit Field Day in Geneva

The Cornell Fruit Field Day will be held in Geneva and will feature ongoing research in berries, hops, grapes, and tree fruit, and is being organized by Cornell University, the NYS Agricultural Experiment Station, CALS Fruit Program Work Team and Cornell Cooperative Extension. Attendees will be able to select from tours of different fruit commodities.

The event will be based at the NYSAES Fruit and Vegetable Research Farm South, 1097 County Road No. 4, 1 mile west of Pre-emption Rd. in Geneva, NY. Registration will begin at 8:00 AM and tours will begin at 8:30 and run until 11:30. Lunch will be served at the exhibit tent area between 11:30-12:30 PM. Tours will resume at 1:30 and run until 5:00 PM.

Admission fee will be $50/person ($40 for additional attendees from the same farm or business). Pre-registration is required; walk-in registration may be available for a $10 surcharge on the day of the event.

This year, the International Fruit Tree Association summer tour will be held in Western New York on July 19th and 21st, in conjunction with the Cornell Fruit Field Day, details to follow…….

June 16, 2016 – Commercial Cider Production Workshop in Winchester, VA

The focus of this field day is to showcase current research projects geared towards cider apple production and fermentation. Participants will learn about cider fermentation and yeast assimilable nitrogen (YAN) as well as the impacts of harvest maturity and postharvest storage on cider quality. The workshop will also include a visit to a variety trial orchard block, a sensory faults demonstration, and regional cider evaluations (participants to bring cider for demo). There will also be a networking lunch and a concluding discussion to assess the future directions of the Virginia cider industry.

Cost: $20.00 per person –***(Registration Fee due by June 10th)***
-Checks made payable to VCE-Frederick -Please mail to 107 N. Kent Street, Winchester, VA 22601
-No cash or credit cards accepted and attendance is limited to the first 48 registrants
-Include contact information with/on check (phone, address, and email preferred)
Please contact Mark Sutphin (mark.sutphin@vt.edu) or 540.665.5699 for additional information.

Registration is Open for the 2016 International Fruit Tree Association Summer Study Tour of Western NY Orchards

July 19-21, 2016
(held *in conjunction with the 2016 Cornell Fruit Field Day in Geneva*)

Registration Includes:
- Hotel accommodations (Monday-Wednesday nights)
- Breakfast and lunch (Tuesday-Thursday)
- Transportation
-3 Days of Tours including a full day at Cornell Fruit Field Day

(click here to view the full itinerary)

Single and double occupancy options available. A local option is also available but does not include hotel accommodations or transportation.

ENYCH Program Educators:

Fruit
Dan Donahue
Phone: 845-691-7117
Email: djd13@cornell.edu
Tree Fruit

Anna Wallis
Phone: 443-421-7970
Email: aew232@cornell.edu
Tree Fruit & Grapes

Laura McDermott
Cell: 518-791-5038
Email: lgm4@cornell.edu
Berries

James O'Connell
Phone: 845-691-7117
Email: jmo98@cornell.edu
Berries & Grapes

Vegetables
Chuck Bornt
Cell: 518-859-6213
Email: cdb13@cornell.edu

Amy Ivy
Phone: 518-561-7450
Email: adi2@cornell.edu

Teresa Rusinek
Phone: 845-340-3990 x315
Email: tr28@cornell.edu

Crystal Stewart
Cell: 518-775-0018
Email: cls263@cornell.edu

Maire Ullrich
Phone: 845-344-1234
Email: mru2@cornell.edu

Business and Economics

Jesse Strzok
Phone: 518.429.1464
Email: js3234@cornell.edu

Content Editor: Dan Donahue

Layout: Abby Henderson