



Fruit Times

Events in the orchard that matter to you

Volume 29, Issue 1 January 2010

The PPV Success Story and How to Maintain Our Quarantine-Free Status

Dr. John Halbrecht, Penn State FREC Nematologist

Ding Dong the Witch is Dead. In the Wizard of OZ, the townspeople were jubilant when they learned the wicked witch was dead and no longer to be feared. Similarly, there was cause for celebration on October 29, 2009 when Secretary of Agriculture Russell Redding officially announced that the Plum Pox Virus (PPV) had been eradicated from Pennsylvania. This announcement came almost exactly ten years after PPV was discovered in North America.

Secretary of Agriculture Russell Redding declares Plum Pox Virus eradicated at a ceremony held at the Penn State Fruit Research and Extension Center in Biglerville.



PPV photos courtesy of Pennsylvania Department of Agriculture

The Plum Pox Virus (a.k.a. Sharka) is considered one of the most economically important virus diseases of stone fruit worldwide. Many varieties of peach, plum, apricot, and nectarine produce unmarketable fruit or prematurely lose their crop when infected with PPV. Aphids are the natural vectors of the virus and it also is transmitted through infected propagation material. Commercial stone fruit is the host of primary economic importance but a number of alternate hosts have also been reported including ornamental *Prunus* and some herbaceous weeds and garden plants.

The first discovery of PPV in North America was from a peach orchard in south central Pennsylvania in October of 1999. Because of the potential damage this virus poses to the stone fruit industry, an aggressive eradication program was implemented. The eradication program utilized intensive surveys of commercial orchards, residential properties, woodlands, and fields to identify infected plants. Over the past ten years more than 2 million plant samples have been tested for PPV.

Whenever a positive sample was confirmed, destruction orders were issued for the infected plant and all susceptible hosts within a 500 meter buffer zone to curtail spread of the virus. In all, some 1,675 acres of

Eradication, continued on page 2

In this Issue

- Plum Pox Eradication
- A Look Back by Dr. Jim Travis
- President's Day Fruit School
- Winter Fruit School
- New Tree Fruit Guide
- Small Fruit News
- Postharvest Concerns
- Upcoming Events

Growing Season Models and Alerts:

<http://frec.cas.psu.edu>

PENNSSTATE



College of Agricultural Sciences

commercial stone fruit were bulldozed and burned during the eradication program. This amounted to approximately 20% of Pennsylvania's stone fruit industry. The price tag to compensate growers for destroyed trees was over \$32 million.

Infested sites were placed under a quarantine that prohibited planting stone fruit. Guidelines established by a scientific panel of experts determined that the quarantine should remain in effect until three consecutive years of negative data had been collected. This would provide a reasonable level of assurance that eradication had been achieved. In Pennsylvania, the last PPV infected trees were found in 2006 thus allowing a declaration of eradication in 2009 and removal of all quarantines on commercial and homeowner plantings.

However it should be noted that experience with PPV in Pennsylvania and elsewhere has shown that the virus is elusive and can be difficult to detect. Therefore, the guidelines also recommend that an ongoing, albeit smaller but focused, PPV survey should continue for up to ten years after the quarantine has been lifted on commercial orchards. This monitoring program is considered an essential follow-up to safeguard the Pennsylvania stone fruit industry against a second round of infection on the chance that an unknown reservoir of PPV escaped detection. As an additional layer of protection, it also is recommended that a quarantine should remain in effect for an additional three years on nursery plantings to ensure that PPV infected plants are not inadvertently distributed to growers.

Once an introduced disease has become established in a new location it is extremely difficult to eradicate. The successful eradication of PPV from Pennsylvania is hailed as a great accomplishment and could not have been achieved without the cooperation of many different groups including fruit growers, PDA, USDA/APHIS, USDA/ARS, Penn State University, and homeowners.

Maintain Control of Virus Vectors by Regular Sampling for Nematodes

A new nematode assay form is available in the 2010-2011 Pennsylvania Tree Fruit Production Guide. Please note that the fee for processing a nematode assay has increased to \$20 per sample beginning January 1, 2010. A copy of the new form can also be obtained from your county extension office or the Fruit Research and Extension Center in Biglerville.



Penn State faculty help Secretary Redding plant a peach tree to commemorate the lifting of the quarantines.

Lessons Learned

The appearance of Plum Pox Virus in Pennsylvania highlights the ever-present risks posed by plant virus diseases. Orchard, landscape, and nursery sanitation



and good cultural practices are key issues in the prevention of virus introductions. Start with a clean planting site, purchase clean planting material and be conscientious about keeping virus reservoirs and vectors under control.

State and federal agencies have initiated clean plant programs to prevent the introduction and spread of foreign pathogens. Best management practices require growers to be familiar with common disease problems and their control. It also is important to remain vigilant for anything unusual and bring it to the attention of experts who can identify the problem.

Penn State has a web site that provides cultural and pest control information for *Prunus* ornamental and fruit producers. Visit <http://sharka.cas.psu.edu/> to read about "Lessons Learned from Plum Pox Virus—Preventing the Introduction of Exotic Plant Pests," "Re-Inventing Our Peach Industry—A Chance to do Everything Right," "Replanting *Prunus* in Sites Previously Affected by Plum Pox," and "Introducing New Plants—Not Pests—to Your Orchard." You may also contact your Penn State Cooperative Extension office for copies of brochures on these topics.

Looking Back on 29 Years at Penn State and Ahead to a New Venture as a Grower

By Dr. Jim Travis, who recently retired from his position as Penn State Plant Pathologist
and Director of the Fruit Research and Extension Center, Biglerville, PA

I retired from Penn State as an Extension Fruit Specialist, Professor of Plant Pathology, and Director of the Fruit Research and Extension Center in December 2009 after 29 years of service. I thoroughly enjoyed all aspects of my employment at Penn State and especially my time working with fruit growers across Pennsylvania. My primary responsibility was for disease management recommendations, education, and research. I had the two best research assistants and colleagues anyone could hope for in Jo Rytter and Dr. Noemi Halbrendt. Noemi will continue to provide critical support to the fruit industry in tree fruit and grape disease management research and education. Dr. Ken Hickey was both my mentor and collaborator over the years. Dr. John Halbrendt has always been willing to listen to an idea and provide insightful feedback. I am very pleased that the Fruit Center and the growers have Dr. Henry Ngugi to provide the leadership for the fruit pathology efforts. I anticipate great accomplishments for the good of the Pennsylvania fruit industry and the science of plant pathology from Henry.



Peach canker surgery. For details from Dr. Travis' work, visit <http://tfg.cas.psu.edu/230.htm>.

Over the years I can remember many problem areas that fruit growers and I worked on to improve fruit production in Pennsylvania. Many of my research and educational programs were funded through the State Horticultural Association research and extension boards. When I started my job in January 1981, peach canker was a serious problem destroying young and mature stone fruit orchards. Growers and I put out demonstration trials across the state to “cut out” cankers in an effort to save trees after several topical fungicide applications proved to be completely ineffective. Due to milder winters over the last few years, peach canker isn't the problem it once was but cutting out cankers still remains the only truly effective eradication tool for growers. Some of the other disease management projects I have worked on over the 29 years with growers have included: apple rootstock susceptibility to fire blight, apple fruit rots, apple wood cankers, apple scab fungicide resistance, peach tree decline, compost use in orchards, fungicide effectiveness, weather monitoring and orchard weather collection devices, expert systems, SkyBit, Plum Pox Virus, disease resistant apple cultivars, and organic apple production.

Of course, the results of these research trials and demonstration plots were presented at regional grower educational meetings, statewide educational meetings, the Hershey meetings and grower workshops and field days. The year I started at Penn State, Dr. Marshall Ritter had set up 39 winter educational meetings across Pennsylvania. It seems that nearly every county in PA had some fruit production in 1981. In April we started the spring pruning meetings. Regional extension meetings have been a big improvement. Reflecting on county meetings, I could fill many pages with accounts of good times, great interactions with growers, and “hair-raising” travel stories with Rob Crassweller and in the first years with Ed Rajotte. Ask Rob.

Students kept things alive and exciting. I enjoyed mentoring them and seeing them grow into professionals. Some of my past students you know, others have moved on to work on fruit or vegetable crops in other areas: Debbie Breth (NY), Bill Kleiner (PA), Dr. Greg Clarke (PA), Dr. Phil Northover (Canada), Fritz Westover (Texas), Andy Muza (PA), and Dr. Beth Gugino (PA).

My future includes growing wine grapes and organic tree fruit with my son Mike in Adams County. My wife and I are renovating a late 1800's farm house and looking forward to more time together and some time to visit grandchildren and do some travelling.

I'd like to thank the fruit growers of the state for many years of professional support and friendship. However, this isn't the end. Now that I am a fruit grower, you'll see plenty of me in the future.



PRESIDENT'S DAY FRUIT GROWERS EDUCATIONAL MEETING

Monday, February 15, 2010

Biglerville High School Auditorium, Biglerville, PA

Morning:

(7:45—Registration; *Moderator—Kyle Knouse*)

- 8:00 **ACFGA Business & Elections**
Kyle Knouse, President
- 8:10 **PA Agricultural Outlook**
Russell Redding, PDA Secretary of Agriculture
- 8:25 **South Mountain Conservation Initiative**
Kimberly Williams, Appalachian Trail Conservancy
- 8:40 **New Products for Insect Control—Friends or Foes?**
Dr. Greg Krawczyk, PSU Entomologist
1 Category Credit
- 9:10 **Fungicide Resistance Management**
Dr. Henry Ngugi, PSU Plant Pathologist
1 Category Credit



- 9:40 **New Varieties and Market Opportunities**
Dr. Rob Crassweller, PSU Pomologist
1 Category Credit
- 10:10 Break/Show and Tell
- 10:25 **PSU Pest & Weather Alert Systems**
Drs. Katie Ellis & Noemi Halbrendt, PSU Extension
- 11:00 **New Orchard Floor Management Techniques**
Dr. Rob Crassweller, PSU Pomologist
1 Category Credit
- 11:30 Group A—Lunch/Group B—Auditorium
- 12:15 Group B—Lunch/Group A—Auditorium
Taking IPM to the Next Level
Dr. Larry Hull, PSU Entomologist
1 Category Credit



Afternoon:

- 1:00 **Honeycrisp—Past, Present & Future**
Dr. Jim Schupp, PSU Pomologist
1 Category Credit
- 1:30 **Crop Risk Management**
Lynn Kime, PSU Ag Economist
- 1:40 **A Hand-Held Device for Determining Crop Load**
Tom Kon, PSU Horticulture Graduate Student
- 2:00 **Training for Employee Safety**
Jim Harvey, PSU Rural Health Safety Specialist
2 Core Credits



Concurrent Sessions

Program for Younger Family Members

- 9:00 **Tractor Safety Short Course (In Ag Shop)**
Darlene Resh, PSU 4-H Educator
This session is different from the one offered in 2009!

Special Session in Spanish (In Library)

- 1:00 **Horticulture Best Management Practices in Orchards**
Dr. Rob Crassweller, PSU Pomologist, translated by Bruce Hollabaugh, Hollabaugh Orchards
- 1:30 **Orchard Scouting as a Tool for Sustainable Fruit Production**
Dr. Katie Ellis, PSU Educator
1 Category Credit



Registration Form:

\$15 per person for general session (covers lunch and educational materials); No charge for concurrent sessions (unless staying for lunch)

Number Attending _____ X \$15 = \$ _____

Names of persons attending:

General Session _____

Tractor Safety Session _____

Spanish Session _____

Please send payment, payable to ACFGa, by February 10 to:

Brenda Cressler, ACFGa

33 Musselman Avenue

Biglerville, PA 17307

(717) 677-7444; acfga@comcast.net

PENNSSTATE



College of
Agricultural
Sciences



WINTER FRUIT GROWERS EDUCATIONAL MEETING

Wednesday, February 17, 2010

Savoy Restaurant, 11655 Anthony Hwy, Waynesboro, PA

Morning Session:

Moderator—Sean Tracey

- 8:00 **Registration**
- 8:30 **Franklin County Horticultural Society Business Meeting**
Sean Tracey, President
- 8:45 **PDA & Crop Insurance Update**
Eric Cowden, Regional PDA Director
- 9:00 **Taking IPM to the Next Level**
Dr. Larry Hull, PSU Entomologist
1 Category Credit
- 9:45 **Fungicide Resistance Management**
Dr. Henry Ngugi, PSU Plant Pathologist
1 Category Credit
- 10:15 **Break/Show and Tell**
- 10:30 **Innovative Orchard Floor Management & Grass Suppression Techniques**
Dr. Rob Crassweller, PSU Pomologist
1 Category Credit
- 11:00 **Honeycrisp—Past, Present, & Future**
Dr. Jim Schupp, PSU Pomologist
1 Category Credit
- 11:30 **NRCS Cost Sharing Programs for Growers**
Dr. Dave Biddinger, PSU Entomologist
- 11:50 Lunch



Afternoon Session:

- 12:45 **New Products for Insect Control—Friends or Foes?**
Dr. Larry Hull, PSU Entomologist
1 Category Credit
- 1:15 **PSU Pest & Weather Alert Systems**
Dr. Katie Ellis, PSU Extension Educator
- 1:45 **New Varieties & Market Opportunities**
Dr. Rob Crassweller, PSU Pomologist
- 2:15 **Training for Employee Safety**
Jim Harvey, PSU Rural Health Safety Specialist
2 Core Credits



Registration Fee:

\$10 per person (covers lunch)

Please make check payable to:
Franklin County Horticultural Society

Please send payment by February 10 to:

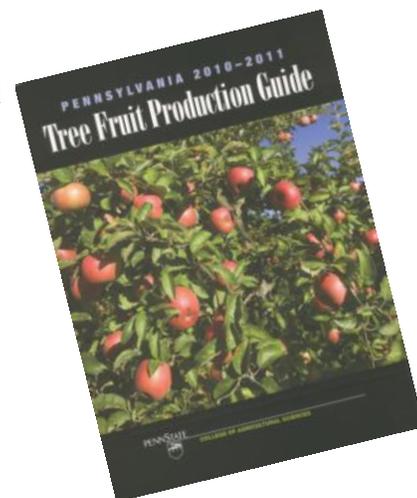
Jack Mickey, Franklin Co. Horticultural Society
2197 Lincoln Way West
Chambersburg, PA 17201

2010-2011 Pennsylvania Tree Fruit Production Guide

Dr. Greg Krawczyk, Penn State FREC Entomologist and Tree Fruit Production Guide Coordinator

The new Penn State *Tree Fruit Production Guide* is now out and available for purchase. In addition to the wealth of information related to all aspects of fruit production, the new guide includes revised and updated recommendations related to all aspects of tree fruit production; biology of diseases, pests, and beneficial insects; updated pest control methods; as well updated information on apple rootstocks, peach varieties, disease control, and chemical thinning. The guide also includes completely revised information related to the actual cost of fruit production.

The *2010-2011 Pennsylvania Tree Fruit Production Guide* is listed as Publication AGRS-045. The cost of the guide is \$25.00 plus shipping and handling. To obtain a copy, contact your local county Extension office or the Penn State College of Agricultural Sciences Publications Distribution Center, 112 Agricultural Administration Building, University Park, PA 16802-2602. Telephone: 814-865-6713, Fax: 814-863-5560, E-mail: AgPubsDist@psu.edu



New Educational Opportunities at the Mid-Atlantic Fruit and Vegetable Convention

The Mid-Atlantic Fruit and Vegetable Convention has become the premier grower meeting in the Northeast combining three days of six or more concurrent educational sessions with a large industry trade show and numerous networking opportunities—all designed to enable fruit, vegetable, and berry growers as well as direct marketers to stay on the cutting edge of their industries. About 1,800 persons from throughout the mid-Atlantic region and beyond gather each year at the Hershey Lodge and Convention Center. Registration is open to all interested commercial fruit, vegetable, and berry growers; direct marketers; and allied industry personnel.

The 2010 Convention will feature several new sessions. On Monday, February 1, the day before the Convention opens, the Young Grower Alliance, the State Horticultural Association, and Penn State Cooperative Extension will present a special workshop, "Farm Transition - Bringing in the Next Generation," featuring Dr. Ann Dugan from the University of Pittsburgh. There is a special \$50 registration fee for this workshop. The same day, the Pennsylvania Vegetable Growers Association will present a Basic Vegetable Production workshop. There is a \$25 registration fee for this workshop, although persons registering for the main Convention will not have to pay the extra fee but will be required to pre-register.

On Wednesday, February 3, a special session for Spanish speakers titled "Técnicas de Producción de Frutas y Hortalizas" will be offered. It will cover some basic topics in fruit and vegetable production—all presented in Spanish. This session is available to any persons registered for the Convention.

Wednesday evening, the Pennsylvania Vegetable Growers Association will present a Vegetable Grafting Workshop with Cary Rivard from North Carolina State. There is a \$20 fee for this workshop. There will also be a Cut Flower Design workshop offered at no cost. A new event on Wednesday will be the Taste of the Mid-Atlantic contest to determine the best value-added fruit and vegetable products from farm markets across the region. The annual Mid-Atlantic Cider Contest is conducted during the Convention to determine the best cider in the region.

For more information, please visit: <http://www.mafvc.org/html/>.

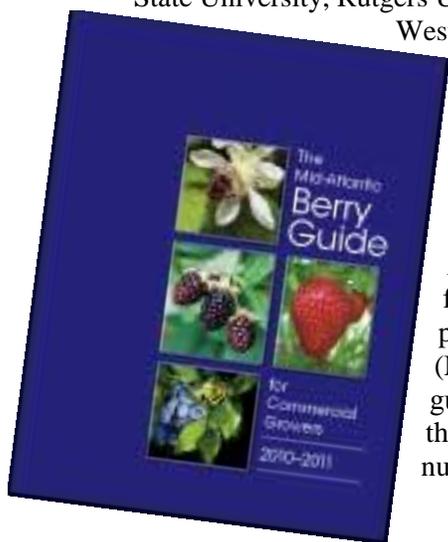


Small Fruit News and Opportunities

Kathy Demchak, Penn State Department of Horticulture

2010 Mid-Atlantic Berry Guide Now Available.

The new 2010 Mid-Atlantic Berry Guide is now available. The guide has 39 current contributors from Penn State University, Rutgers University, The University of Delaware, The University of Maryland, Virginia Tech, West Virginia University, and USDA-ARS, Beltsville. All information including that on cultivars, pesticides, pests, and economics is updated; information on day-neutral strawberry production is expanded; and best of all, this version has an index. That should make it easier to find what you are looking for in the guide's 275 pages.



Pennsylvania growers can obtain the guide for \$20 through most county Extension offices (call ahead to make sure they have it in stock), or directly from the College of Agriculture's Publications Distribution Center (tax plus a \$5 postage and handling fee will be added). Call 814-865-6713 or 877-345-0691 to obtain the correct total price. VISA and Mastercard orders are accepted. Growers in cooperating states (Maryland, New Jersey, Virginia, Delaware, and West Virginia) should obtain the guides from your state's Extension services – you might want to call ahead to see if they are selling this version. If not, growers from any state can order using the phone numbers above.

North American Raspberry and Blackberry Conference



Looking for an educational winter getaway? The 2010 Raspberry Blackberry Conference will be held in Monterey, California from Feb. 24th to 26th and has an excellent lineup of activities. A Caneberry Tour of farms in the Watsonville area takes place on Feb. 24th, where you'll have a chance to see California raspberry and blackberry production, shipping and cooling facilities, and have lunch at a pick-your-own and retail operation. A Berry Science tour on Feb. 26th takes you on tours of Plant Sciences, Inc., Driscoll's tissue culture lab, and University of California field trials. A California Agriculture Tour, also on Feb. 26th, takes you on a general tour of California berry and vegetable production and D'Arrigo Bros. packing and shipping facilities, ending with a vineyard walk and wine tasting. The educational sessions include talks from University of California extension specialists, growers, personnel from USDA-ARS, Corvallis, and more. Details can be found at NARBA's Web site: <http://www.raspberrylblackberry.com/>.

Recognize These Postharvest Disorders of Honeycrisp? **Here are Some New Resources on Storage of Fruit**

Michigan State University recently published *A summary of Honeycrisp storage recommendations across North America*. This article includes storage recommendations for Honeycrisp in all growing regions of the United States: <http://postharvest.tfrec.wsu.edu/REP2010A.pdf>.

The University of Minnesota has an excellent web resource for Honeycrisp to help growers and researchers resolve production and postharvest issues with the variety: <http://smfarm.cfans.umn.edu/Honeycrisp.htm>.

University of California, Davis recently added *Small Scale Postharvest Practices: A Manual for Horticultural Crops* to their web site. This is an excellent (and now free) resource that covers all aspects of fruit and vegetable post-harvest practices from harvest through transportation and storage: <http://postharvest.ucdavis.edu/datastorefiles/234-1450.pdf>.

Source – Chris Sater, WSU-TFREC January 2010 Postharvest Newsletter



Soggy breakdown of Honeycrisp (left). Internal injury can extend to the surface in severe cases (right), leading to surface browning that differs from the clean, sharp edges of soft scald.



Soft scald on Honeycrisp. Injury begins as a ribbon-like light brown lesion with well-defined edges (left) and over time becomes dark brown as tissues degrade and decay begins (right). It may or may not be associated with soggy break down.

Source: Beaudry and Contreras, Michigan State University, Report to the 2009 Great Lakes Fruit Expo

Upcoming Events

Winter Fruit Growers Educational Meetings

Monday, Feb. 15—Adams County; Contact Tara Baugher, tab36@psu.edu, 717-334-6271

Tuesday, Feb. 16—Lancaster/York Counties; Contact Tim Elkner, tee2@psu.edu, 717-394-6851

Wednesday, Feb. 17—Franklin County; Contact Tara Baugher, tab36@psu.edu, 717-334-6271

Tuesday, Feb. 23—Appalachian Fruit Growers, Bedford County; Contact Tom Ford, tgf2@psu.edu, 814-623-4800

Wednesday, Feb. 24—Western PA; Contact Bob Pollock, rcp3@psu.edu, 724-465-3880

Thursday, Feb. 25—Erie County; Contact Andy Muza, ajm4@psu.edu, 814-825-0900

Tuesday, Mar. 2—Snyder County; Contact John Esslinger, cje2@psu.edu, 570-837-4252

Wednesday, Mar. 3—Southeast Region, Leesport; Contact Andy Beck, awb123@psu.edu, 570-622-4225

Thursday, Mar. 4—Lackawanna County; Contact John Esslinger, cje2@psu.edu, 570-963-6851

Program Highlights

- Taking IPM to the Next Level
- Web-Based Pest Alerts
- Retooling Orchards with New Technologies
- New Varieties and Emerging Markets

Horticultural Conventions

Mid-Atlantic Fruit & Vegetable Convention, February 2- 4, 2010, Hershey Lodge & Convention Center, Hershey, PA, www.mafvc.org

Raspberry Blackberry Conference, February 24-26, Monterey, California, www.raspberryblackberry.com

View *Fruit Times* on the web at:
<http://fruittimes.cas.psu.edu>

Fruit Times is brought to you by Penn State College of Agriculture Faculty and Extension

Educators:

Horticulture

Rob Crassweller, Pomology, rmc7@psu.edu
Jim Schupp, Horticulture, jrs42@psu.edu
Kathy Demchak, Small Fruit, efz@psu.edu
Kathy Kelley, Horticulture, kmk17@psu.edu
Rich Marini, Horticulture, rpm12@psu.edu

Entomology

Greg Krawczyk, Tree Fruit, gxk13@psu.edu (Content Editor)
Larry Hull, Tree Fruit, lah4@psu.edu

Plant Pathology

Henry Ngugi, Plant Pathology, hkn3@psu.edu
John Halbrecht, Nematology, jmh23@psu.edu

Food Science - Luke Laborde, lfl5@psu.edu

Ag Economics - Jayson Harper, jharper@psu.edu;
Lynn Kime lfk4@psu.edu

Extension Educators

Tara Baugher, Adams, tab36@psu.edu (Production Editor)
Andy Beck, Berks and Schuylkill, awb123@psu.edu
Tim Elkner, Lancaster, tee2@psu.edu
John Esslinger, Montour, cje2@psu.edu
Katie Ellis, Specialty Crop Innovations, kag298@psu.edu
Thomas Ford, Blair, tgf2@psu.edu
Thomas Murphy, Lycoming, tbm1@psu.edu
Andy Muza, Erie, ajm4@psu.edu
Eric Oesterling, Westmoreland, reo1@psu.edu
William Pencek, Wyoming, wgp1@psu.edu
Robert Pollock, Indiana, rcp3@psu.edu
Jim Remcheck, Ag Economics/Marketing, jar5006@psu.edu
Lee Young, Washington, ljs32@psu.edu



Individuals may join our distribution list by sending an e-mail to:

Fruit-Times-L-subscribe-request@lists.psu.edu

No subject or message text is required.

To drop your paper subscription, please contact your local extension office.

Penn State encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, contact the Penn State Extension Office hosting the event, in advance of your participation or visit.

This publication is available in alternative media upon request.

The Pennsylvania State University is committed to the policy that all persons shall have equal access to programs, facilities, admission, and employment without regard to personal characteristics not related to ability, performance, or qualifications as determined by University policy or by state or federal authorities. It is the policy of the University to maintain an academic and work environment free of discrimination, including harassment. The Pennsylvania State University prohibits discrimination and harassment against any person because of age, ancestry, color, disability or handicap, national origin, race, religious creed, sex, sexual orientation, or veteran status. Discrimination or harassment against faculty, staff, or students will not be tolerated at The Pennsylvania State University. Direct all inquiries regarding the nondiscrimination policy to the Affirmative Action Director, The Pennsylvania State University, 328 Boucke Building, University Park, PA 16802-5901, Tel 814-865-4700/V, 814-863-1150/TTY.

Where trade names appear, no discrimination is intended, and no endorsement by Penn State Cooperative Extension is implied.

Penn State Cooperative Extension programs are open to all, regardless of their ability to pay. Please contact us if you require reduced or waiver of fees to attend this program.