

Kentucky Fruit Facts

June Newsletter 2018

<http://www.uky.edu/hort/documents-list-fruit-facts>

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Fruit Crop News

John Strang, U.K. Extension Horticulturist and Rick Bessin,
U.K. Extension Entomologist

The Summer Solstice arrived June 21st and it is now officially summer. Consequently, the day length is starting to shorten and the list of summer jobs just keeps getting longer. As I stand out in the field and the sun beats down this past winters cold seems a little more appealing. The typical summer weather localized shower patterns are set up and some areas continue to be very wet while others are hoping for rain.

Dana and Trudie Reed at Reed Valley Orchard outside of Paris, KY hosted our April 3rd Orchard Tour and growers had an opportunity to see an excellent four-year-old apple planting trained to the tall spindle system (masthead photo). Trees are planted three feet apart in the row. Pruning and training are very different from what we have done previously in Kentucky. Dana and Dwight Wolf described the training and pruning involved with system and the results are impressive. Dana said that he wished that his whole orchard was planted this way and is gradually converting his orchard over.

Blueberry harvest and thornless erect blackberry harvest are in full swing. I talked with several blueberry growers that have less than full crops due to the April freeze, but fruit quality and size are good. Several thornless blackberry growers in the



more southern areas of the state have experienced florican collapse or death also due to the April freeze that damaged canes particularly on early maturing varieties. Injured canes collapse as the summer heat moves in because they can't move enough water to keep hydrated.

The insect and disease situation continues to evolve. Japanese beetles are emerging and numbers are expected to be up because of the past several wet seasons. We sprayed recently for European red mites in our Lexington apple orchard. The Kentucky Plant Disease Diagnostic labs report that fire blight is again a problem in apple orchards, post bloom infections have continued and been fairly serious. The wet spring led to lots of cedar apple rust infections on apples with insufficient spray programs and there is a fair amount of frog eye leaf spot. Bacterial spot of peach is prevalent and black rot on grape is again a top problem.

Our Lexington biofix for Sooty blotch and Flyspeck on apple was May 20 which was 10 days past petal fall this year. The Sooty blotch and Flyspeck model http://www.wagwx.ca.uky.edu/plant_disease.html indicates that we accumulated 175 hours of leaf wetness in Lexington as of June 26 which is the number needed to begin spraying for Sooty blotch and Flyspeck.

Spotted wing drosophila are showing up early and have been trapped across the state although counts in most locations are low in the 1-6 range, with some farms not catching any. During the week of June 22 one location in south central Kentucky caught close to 40 SWD in their trap. Dr. Ric Bessin recommends that growers initiate a weekly spray program on susceptible crops when the fruit begin coloring up



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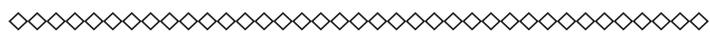
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LEXINGTON, KY 40546



Disabilities
accommodated
with prior notification.

(blackberries, raspberries and blueberries) as soon as one SWD is caught in their traps. Last year was the first year that a few Kentucky growers found this pest in blueberries. Rotate pesticides and pay close attention to the Pre Harvest Interval (PHI) to insure that residues dissipate prior to fruit harvest. If you are looking for additional information on SWD identification and management see: <http://entomology.ca.uky.edu/ef229> and <https://entomology.ca.uky.edu/ef230>



NOTE: Weblinks. If some links are not working properly in your browser, please cut and paste.



Upcoming Meetings

All times EST unless noted

July 16 UK Viticulture and Enology Summer Field Day, 4321 Emmert Farm Lane, Lexington, KY 40514. 9:00 a.m. – 3:00 p.m. If you have questions contact Patsy Wilson at: Phone: 859-494-1657 or Email: patsy.wilson@uky.edu. Please see the following link for all meeting and registration information. <https://2018ukviticulturefieldday.eventbrite.com/>

July 26 UK Horticultural Research Farm Twilight Tour, 4321 Emmert Farm Lane, Lexington, KY 40514. 6:00 p.m. until dark, Additional information on the tour follows below.

July 26-28 2018 North American Fruit Explorers Annual Meeting, Danville Area Community College, Danville, IL For more information contact Tom Knaust at tknaust@gmail.com.

Aug. 5-8 2018 Northern Nut Growers Association Conference, Le Baluchon Eco Resort in Saint-Paulin, Quebec JOK 3GO, Canada. See <https://nutgrowing.org/research-and-resources/2018-northern-nut-growers-association-conference/> for program and registration information.

Aug. 13 Apple Budding Workshop, Letcher County Extension Office, 478 Extension Drive, Whitesburg, KY 41858. Contact 606-633-2362.

Sept. 22 UK Robinson Center Mountain Ag Field Day, 130 Robinson Road, Jackson, KY 41339. Contact Bobby Ammerman, Email: bammerman@uky.edu.

uky.edu.

Oct. 27 Fall Kentucky Nut Growers Association Meeting, Hardin County Extension Office, 201 Peterson Dr., Elizabethtown, KY 42701; 9:30 a.m. Contact Danny Ganno 270-860-8362.

Jan. 7-8, 2019 Kentucky Fruit and Vegetable Conference, Embassy Suites Hotel, 1801 Newtown Pike, Lexington, KY 40511. Contact John Strang Phone: 859-257-5685; Email: jstrang@uky.edu

Horticulture Research Farm Twilight Tour

Thursday, July 26, 2018 (6:00 p.m. until dark)

4320 Emmert Farm Lane

Lexington, KY 40514

The U.K. Horticulture Department in cooperation with the Blue Grass Community and Technical College (BCTC) and Kentucky State University will host a twilight tour at the Horticulture Research Farm. Vegetable, Fruit and Sustainable Agriculture tours featuring current research projects and the CSA will begin at 6:00 p.m. The three concurrent tours will be repeated two times until dark. Tours will start at the research center parking lot. Cold drinks will be provided for participants.

The U.K. Horticulture Research Farm is located on the south side of Lexington approximately one block west of the intersection of Man O'War Boulevard and Nicholasville Road (U.S. 27). The entrance to the farm (Emmert Farm Lane) is off of Man O'War Boulevard at the traffic light opposite the entrance to the Lowe's and Walmart.

Questions? Contact: Pam Compton by phone: 859-257-2909; e-mail: pscompl@uky.edu



Pesticides and Responsible Pollinator Protection

By Ric Bessin, UK Extension Entomologist

Pollinator protection has become a common phrase we frequently hear. Those of us working in agriculture recognize that honey bees and other pollinators are as much a part of agriculture as cattle and corn. Losses of honey bees since 2006 have been at unacceptable and unsustainable levels due to a variety of causes and has led to creation of pollinator protection plans. One of the risks that insect pollinators face is

pesticides. When it comes to protecting pollinators from pesticides there are a few key risks that need to be managed.

While this article deals with protecting pollinators from pesticides, I'll note that pesticides are not the sole cause of pollinator losses nor may they be the primary cause. However, pesticides are under our direct control, and we can take steps to minimize their effects on pollinators.

Managing pesticides to avoid impacting pollinators is required to stay consistent with pesticide labeling. Most insecticide labels have pollinator protection requirements.



Figure 1. Pesticide contamination of blooming weeds or ornamental plants is just as hazardous as that of flowering crops (Photo: Ric Bessin, UK).

Avoid Contaminating Plants in Bloom

The risk of harming insect pollinators is low when applications are made to fields with no flowering plants, even when applying materials that are highly toxic to pollinators. However, when we make any pesticide application to plants in bloom, whether crops or weeds, we need to consider the risk to pollinators.

Many insecticide labels prohibit spraying areas in which pollinators are actively foraging. This is subtle language as it does not say “do not spray blooming plants,” because there are times when plants may be in bloom and pollinators are not actively foraging. Examples of this include cool mornings when the temperature is below 50°F or in the evening when the sun is beginning to go down. It also does not say blooming “crops,” as pollinators do not care if it is a flower on a weed or crop plant. Spraying weeds in flower can be just as hazardous to pollinators as

spraying crops in bloom. Some labels will require the pesticide applicator notify beekeepers 48 hours in advance when applying these products to any plant in bloom. The KDA now has an on-line anonymous program that applicators can use to notify beekeepers within 5 miles of fields to be treated ([Pollinator Protection Program](#)).



Figure 2. Bumble bees are among our most important wild pollinators (Photo: Ric Bessin, UK)

Avoid Pesticide Drift onto Colonies

Sites in which we have had direct evidence of honey bee colonies killed by pesticides, pesticide drift over the colonies is frequently the case. To avoid pesticide drift onto honey bee colonies, the first step is to know where the colonies are located around fields to be treated. Get to know local beekeepers and where they keep their colonies. Work with them to select locations for colonies that will be set back from areas that will be treated. Having a vegetation buffer strip of trees will help to prevent drift onto the colonies. Don't spray when the conditions favor drift, especially in the direction of managed colonies.

Avoid Contaminating Water Sources for Pollinators

Pollinators collect more than just nectar and honey. If you have ever had a teaspoon of honey, you will know that the next thing you need is a drink of water. It is the same with honey bees. Beekeepers put out watering stations for honey bees, and just like the colonies themselves, we need to avoid pesticide drift that would result in contamination over these areas. It is best to locate watering stations in areas protected from pesticide drift, as with the colonies.



On-line Notification System for Applicators to Communicate with Local Beekeepers

By Ric Bessin, U.K. Extension Entomologist

There has been some controversy surrounding the use of some pesticides and their effect on pollinator health, particularly honey bees. Dr. Tammy Potter, state apiarist, at the Kentucky Department of Agriculture has developed an online tool to facilitate communication among pesticide applicators and their local beekeepers. This registry system can be used when, under specific circumstances as indicated by pesticide labels, applicators must notify beekeepers 48 hours prior to certain types of applications.

Pollinator Protection Label Requirements

The pesticides which pose the greatest potential risk to managed pollinators have honey bee icons on the label to warn applicators and impose specific restrictions in some situations. While this is a small group of active ingredients that have been shown to be acutely toxic to honey bees, these active ingredients are formulated into dozens of insecticide products. Labels with the honey bee icon are *Actara, Admire Pro, Advise, Agri-Flex, Agri-Mek, Alias, Apta, Belay, Bexar, Brigadier, Certador, Centric, Couraze, Endigo, Exirel, Flagship, Imidashot, Lada, Leverage, Macho, Malice, Meridian, Midash, Montana, Nuprid 4F, Pasada, Obelisk, Scorpion, Skyrader, Swagger, Tempest Dual Action, Torac, Venom, and Voliam-Flex*. When these products are used where there are no crops or weeds in bloom and bees are not foraging in the treated area, there is little risk. However, when there are foraging bees in the treated area, additional restrictions are imposed. These labels distinguish crops attractive to pollinators that are under contracted pollination services and those not under contract for pollination.

Crops Using Contracted Pollination Services

These labels state “Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following condition has been met: If an application must be made when bees are at the treatment site, the beekeeper providing pollination services must be notified no less than 48-hours prior

to the time of the planned application so the bees can be removed, covered, or otherwise protected prior to spraying.” Since the crop manager has a contract with the beekeeper, there should already be established communication between the crop manager and beekeeper. Simply notifying the pollination contract beekeeper 48 hours ahead with the name of the product prior to the application gives the beekeeper time to take actions to protect the honey bees.

Crops without Pollination Contracts

For food and ornamental crops not under contract for pollination services there is a similar restriction while bees are foraging; however, the conditions permitting applications are different. An application would be permitted if one of the five following conditions is met:

1. The application is made after sunset
2. The application is made to the target site when temperatures are below 55°F
3. The application is made in response to a public health emergency
4. The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48 hours prior to the time of planned application so beekeepers can take actions to protect their bees, or
5. If the application is to prevent economic losses, and documented determination consistent with an IPM plan is met, and every effort is made to notify beekeepers no less than 48-hours prior to the planned application.

The online tool that has been developed helps applicators fulfill the third option, making the application in accordance with a state-administered apiary registry. This is a voluntary program and gives pesticide applicators one additional alternative.

KDA Pollinator Protection App

The Kentucky Department of Agriculture has developed a tool to help pesticide applicators comply with some of these label requirements. This on-line state registry is intended to facilitate communication among pesticide applicators and their neighboring

beekeepers so that beekeepers are alerted in advance to pesticide applications that require notification. The system requires beekeepers to register their honey bee colony locations initially. Then if a pesticide applicator is planning to make an application that requires beekeeper notification, the applicator can submit the planned application 48-hours in advance.

The system then notifies registered beekeepers of honey bee colonies within 5 miles of the application that a high risk application will be made in 48-hours. This gives the beekeeper time to protect the colonies in that area. The beekeepers are anonymous, and others cannot see their colony locations. In addition, the person making the application is anonymous; the beekeeper is alerted that an application will be made within 5 miles of their bees without knowing who is making the application.

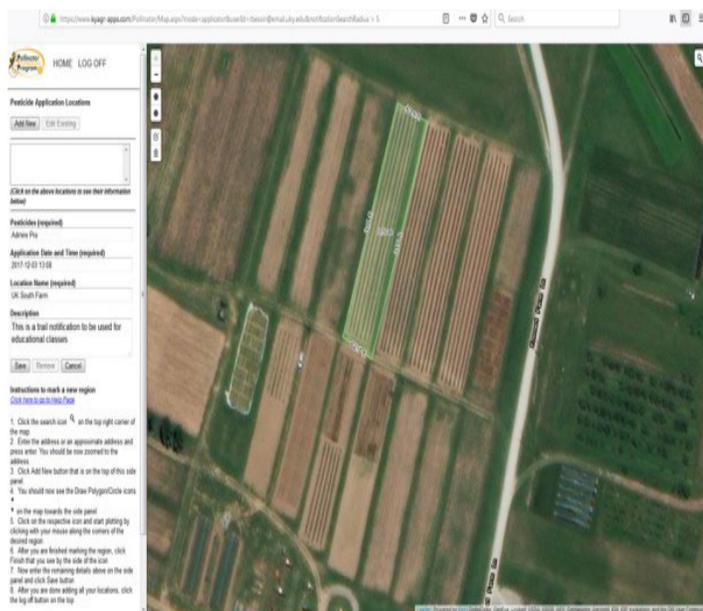


Figure 3. This is the page an applicator would use to highlight the field to be treated. Only the applicator would be able to see the exact location of application.

This notification system, as well as instructions on how to use it, is located on the Kentucky Department of Agriculture website at: <https://www.kyagr-apps.com/Pollinator/> This is a voluntary system; it provides another option to help applicators comply with the beekeeper notification requirements with some insecticide labels.

Cane Diseases of Brambles (PPFS-FR-S-17)

By Nicole Ward Gauthier, U.K. Extension Plant Pathologist

Several cane diseases commonly lead to the formation of cankers in Kentucky bramble plantings. If left

unchecked, these fungal diseases significantly reduce overall yields and limit the longevity of bramble plantings.

Cane Diseases of Brambles

Daniel Becker
 Extension Associate

Nicole Ward Gauthier
 Extension Plant Pathologist

IMPORTANCE

Cane diseases that commonly lead to the formation of cankers are known to cause yield losses in bramble plantings in Kentucky, as well as in surrounding midwestern and southeastern states. Severe infections can extensively damage individual fruiting spurs and/or whole canes (Figure 1), resulting in failure of fruit to ripen properly. Often, cane diseases occur secondarily as a result of environmental or mechanical stressors or tissue damages. If left unchecked, these fungal diseases significantly reduce overall yields and limit the longevity of bramble plantings.

This publication discusses the three most commonly observed cane diseases in Kentucky: anthracnose, cane blight, and spur blight. Anthracnose and cane blight can affect both primocanes (current-year canes) and floricanes (second-year or fruiting canes). Spur blight is limited to primocanes. The following table lists the brambles affected by these diseases.

	Anthracnose	Cane blight	Spur blight
Blackberry	X	X	
Black raspberry	X	X	
Purple raspberry	X		X
Red raspberry	X	X	X

CAUSE, SYMPTOMS & SIGNS

Anthracnose
 Anthracnose, caused by the fungal pathogen *Elinore veneta*, can affect canes and leaves. Initially, infected canes develop circular, light gray spots about 1/8 inch

in diameter (Figure 2). Later, these spots enlarge, become sunken, and develop a purplish border with a light gray center (Figure 3). Spots often coalesce (merge together) to form larger cankers, especially on older canes. As cankers age, they become dry and



Figure 1. CANE DISEASES CAN SIGNIFICANTLY DAMAGE BRAMBLES, REDUCING YIELDS AND PLANT VIABILITY.

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Figure 4: PPFs-FR-S-17

This publication discusses the three most commonly observed cane diseases in Kentucky: anthracnose, cane blight, and spur blight. Information on causes, symptoms, disease development, and disease management is included, along with color photos that can aid in diagnosis.

Cane Diseases of Brambles (PPFS-FR-S-17) is available online: <https://plantpathology.ca.uky.edu/files/ppfs-fr-s-17.pdf>.

For additional publications on fruit diseases, visit the UK Plant Pathology Extension Publications webpag: <https://plantpathology.ca.uky.edu/extension/publications>.

FRUIT HUMOR

Why do Bees go on strike?

Because they wanted more honey and shorter working flowers!



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