Kentucky Nursery LISTSERV Bulletin

University of Kentucky Nursery Crops Team

End of March 2018

Cool and Wet Start to Spring

Though spring started over a week ago, temperatures are expected to primarily remain cooler than average for in April with high probabilities for above average rates of precipitation. Isolated days of warm temperatures can occur as well as evenings dipping below freezing.

The long range forecasts predict a spring with limited opportunities to work the soil or to get heavy equipment in the field.

Please see the **UKAg Weather Center's Long Range Outlooks** for more information.

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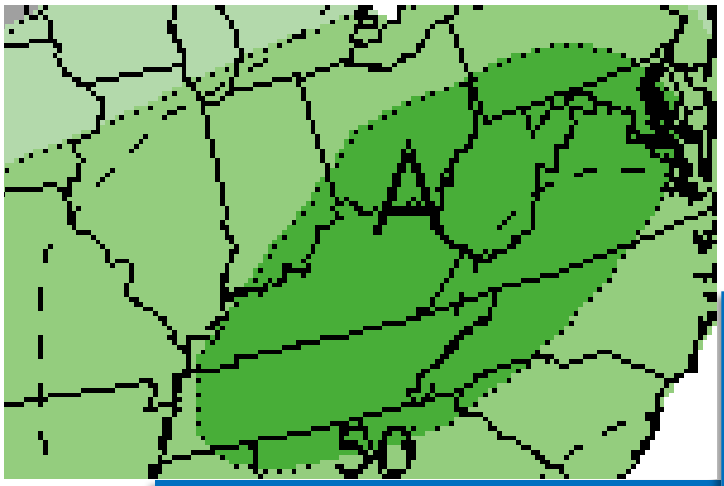
Joshua Knight, Editor



8-15 Day Outlook, Precipitation Probability
March 29, 2018. Valid April 6—12, 2018
Source: NOAA Climate Prediction Center

- **Don't Get Burned by Fire Blight, Disease Management Begins Now**
- **Clearwing Borers Emerge**

Don’t Get Burned by Fire Blight, Disease Management Begins Now

Kim Leonberger, Extension Associate, Plant Pathology
Nicole Ward-Gauthier, Extension Specialist, Plant Pathology

Fire blight is an important disease of apple, crabapple, pear, and flowering pear in Kentucky. Symptoms are often not observed until late spring or early summer; however, initial infections occur at bloom. The pathogen survives winter in dead, dying, and diseased wood and in cankers. Removal of these pathogen sources can reduce spread of fire blight and should be completed in late winter while the pathogen is dormant.

Figure 1. Apple flower clusters infected with fire blight.

Image: Nicole Ward-Gauthier, UK

Fire Blight Facts

- Early symptoms include wilt of flower cluster and blossom death (Figure 1). Disease spreads to shoots or branches where tips wilt and rapidly die (blight) to form a characteristic ‘shepherd’s crook’ (Figure 2). Dark brown, sunken cankers (stem lesions) develop and expand to girdle branches, resulting in branch death (Figure 3).
- Potential hosts include apples, pears, and several landscape woody ornamentals in the rose family.
- Primary infection occurs at bloom and may continue through petal fall or until shoot elongation ends.
- Rainy conditions, periods of high humidity, and temperatures between 65-70°F favor disease development.
- Caused by the bacteria Erwinia amylovora.
- Bacterial cells overwinter in dead, dying, and diseased wood.

Figure 2. Rapid shoot death from fire blight may result in a “shepherd’s crook” appearance.

Image: Nicole Ward-Gauthier, UK

Management Options

- Select varieties that are tolerant or resistant to fire blight.
- Maintain plant health with proper nutrition and irrigation practices.
- Prune to increase air flow through the plant canopy.
- Remove infected plant tissues during winter when plants and pathogens are dormant. Do not prune when trees are wet. Burn, bury, or otherwise dispose of diseased material.

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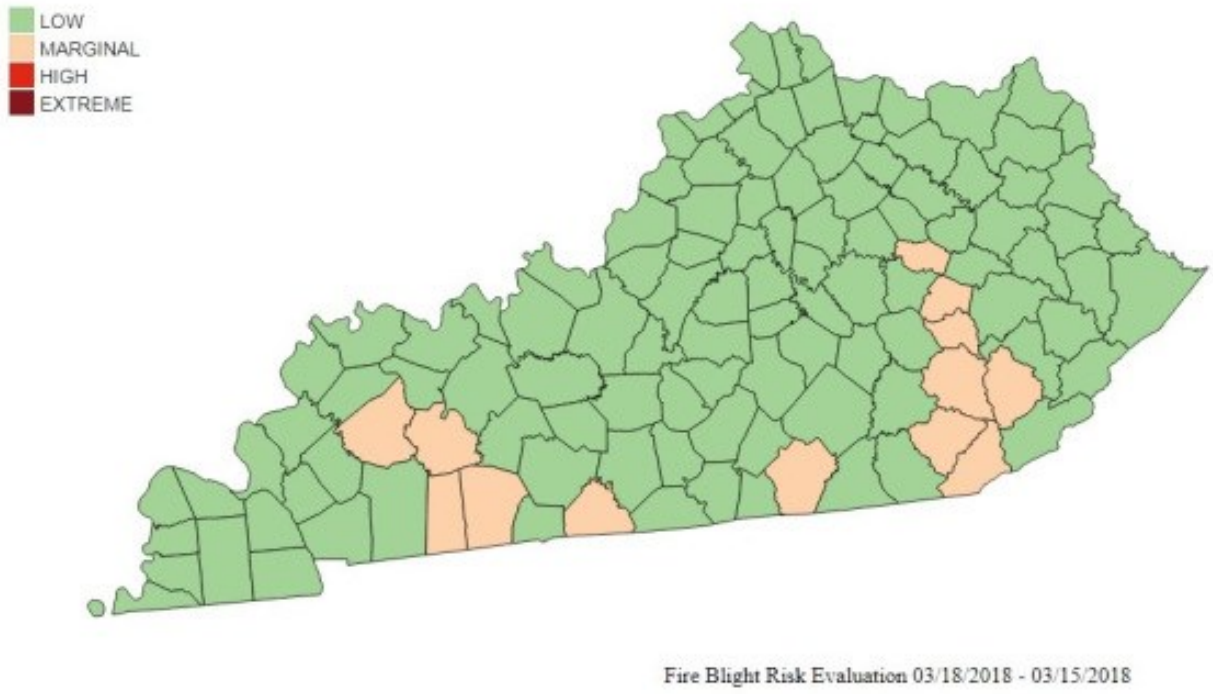

- Bactericides should be applied preventatively. Once infection occurs, sprays are not effective. Homeowners can apply copper during dormancy to reduce overwintering inoculum. Additional bactericides available for commercial growers are presented in the *Midwest Fruit Pest Management Guide* (ID-232). Always follow label directions when utilizing bactericides.
- Fire blight risk throughout the season can be determined by disease development models. Visit the UK Ag Weather Center site for additional information (http://weather.uky.edu/php/fire_blight.php)

Additional Information

- Fire Blight (PPFS-FR-T-12) http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-FR-T-12.pdf
- Fruit, Orchard, and Vineyard Sanitation (PPFS-GEN-05) http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-GEN-05.pdf
- Backyard Apple Disease Management Using Cultural Practices (with Low Spray, No Spray & Organic Options) (PPFS-FR-T-21) http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-FR-T-21.pdf
- Simplified Backyard Apple Spray Guides (PPFS-FR-T-18) http://www2.ca.uky.edu/agcollege/plantpathology/ext_files/PPFShtml/PPFS-FR-T-18.pdf
- Disease and Insect Control Programs for Homegrown Fruit in Kentucky including Organic Alternatives (ID-21) http://www2.ca.uky.edu/agc/pubs/id/id21/id21.pdf
- Commercial Midwest Fruit Pest Management Guide (ID232) http://

Clearwing Borers Emerge

Carey Grable, Extension Associate, Nursery Crops

With the month of May comes the emergence of the Clearwing Borer group. There are several borers in this group including the **dogwood borer**, **lilac borer**, **peachtree borer**, and lesser **peachtree borer**. Growers of **peach**, **plum**, and **flowering cherry** should be especially aware of the lesser peachtree borer (Figure 3).

Borers generally target stressed plants weakened by drought, soil compaction, sun scald, or transplanting. Emergence of these borers can vary greatly as temperature has an effect. This combined with the limited residual toxicity of the chemicals used in controlling these borers makes timing difficult. Growers who wish to monitor for these pests should use the month of April to prepare for scouting by using this month to acquire traps and lures. Online sources for these lures include A.M. Leonard and Great Lakes IPM and AgBio, Inc.

Figure 1. Lesser Peachtree Borer

Monitoring for the emergence of these borers can be done with the use of pheromone lures (Figure 2). These lures are readily available and are used in conjunction with sticky traps / wing traps (Figure 3). Using these traps will allow growers to fine tune their spray schedule. Spraying is generally recommended 10 to 14 days after the first borers are caught and again after 6 weeks if borers are still being caught in traps.

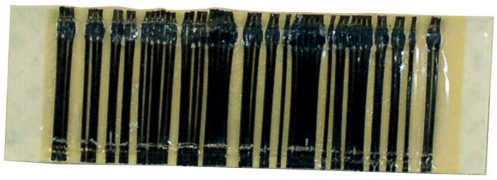

Figure 2. Clearwing borer pheromone lure

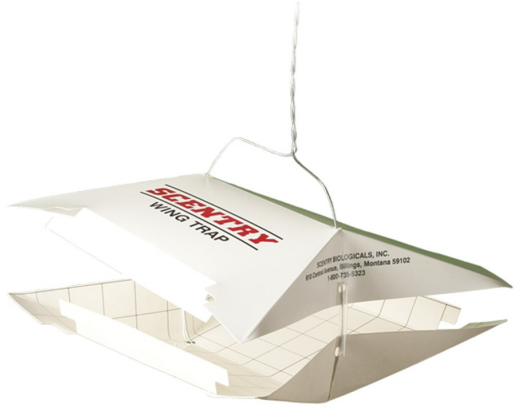

Figure 3. Sticky trap (Wing trap)

For more details on recommended sprays, see Insect Borers of Trees and Shrubs. (https://entomology.ca.uky.edu/ent43)

The University of Kentucky's **Nursery Crop Extension Research Team** is based out of two locations across the bluegrass to better serve our producers.

The **University of Kentucky Research and Education Center (UKREC)** in **Princeton** serves western Kentucky producers while our facilities and personnel on main campus in **Lexington** serve central and eastern Kentucky producers.

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