Kentucky Fruit Facts

May-June 2025
https://horticulture.ca.uky.edu/ky-fruit-facts

Daniel Becker, Editor

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Fruit Crop News

Daniel Becker, UK Extension Associate

Much of Kentucky experienced historic amounts of rainfall during the first week of April. Most of this rainfall was concentrated in the western and central areas of the state (Figure 1). Major and moderate river flooding was widespread and lasted for several weeks thereafter. If you have experienced losses of horticultural crops, including trees, bushes, and vines due to flooding or another natural disaster, see Tara Vaughn's article on the USDA Tree Assistance Program later in this newsletter.

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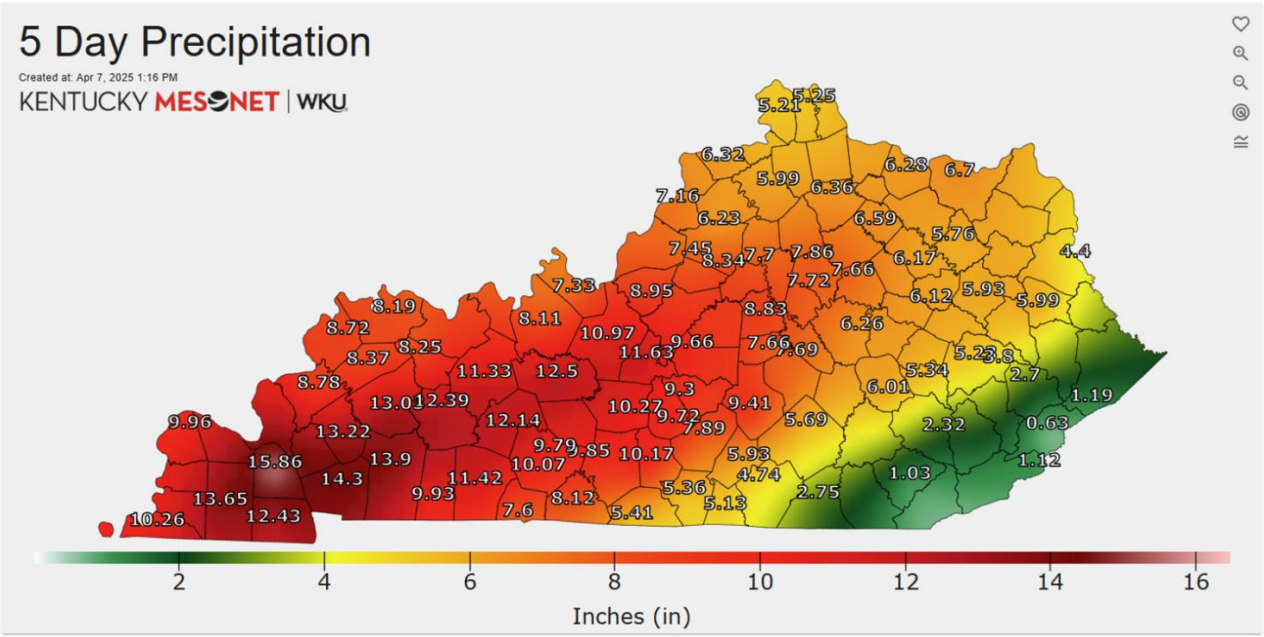
I have heard reports of growers with crop losses due to winter injury of blackberries, peaches, and some grapes. Much of this injury is due to the minimums experienced around January 20-22 when temperatures dropped into the negative single digits and below in certain areas (Figure 2). The coldest conditions occurred in the central and northern parts of the state and this was where most of the damage occurred. Symptoms were likely exacerbated due to the warm and dry conditions the previous autumn. Extended warm weather inhibits proper hardening of perennial plants while drought increases stress heading into dormancy. Stressed and declining plants are often more susceptible to winter injury. Several frosts and freezes during bloom also led to further losses.

Figure 1. *5-day precipitation totals (April 2-7, 2025). Courtesy: Kentucky Mesonet, Western Kentucky University)*



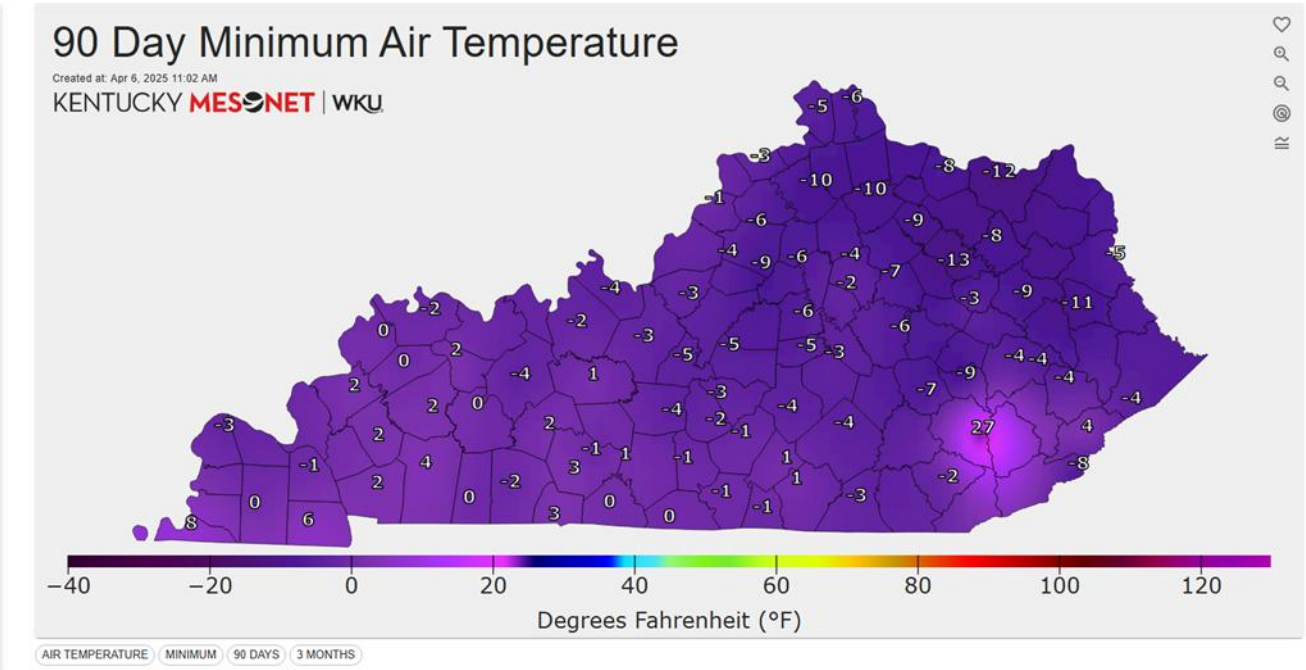


Figure 1. *90-day minimum air temperature (January-March, 2025). Courtesy: Kentucky Mesonet, Western Kentucky University)*

We did not get as cold at the western end of the state, and fortunately I have not heard from any growers reporting of winter injury to their crops. However, I have heard several growers mention that pollination during bloom was lower than expected. Apple trees, particularly, were noted as having plenty of flowers but fewer fruits developing from them. Most of this is due to the weather. Except for late March when blooms first opened, much of April was noticeably cool, cloudy, and windy. Conditions such as these restrict honeybee flight, as they do not like to venture out of the hive when temperatures during the day are in the 50's and below. This has also led to an interesting situation with a protracted bloom and uneven fruit development. I have noticed that there are some large fruits on trees, many which are medium-sized (10-15 mm in diameter), along with a fair number of open blooms still present at the end of the month. A thinner spray probably won't do much to the larger fruits but hopefully it will drop some of the medium-sized fruits and plenty of the ones that have just set.

Dr. Shawn Wright, horticulture extension specialist, has relayed that a new herbicide premix of active ingredients flumioxazin and rimsulfuron has become available and is currently registered for use in the state. Valent is the manufacturer of this product, and the trade name is Chateau® Complete. Use this link to view a specimen label for this herbicide. It is a water dispersible granule and is best used in sprayers with tank agitation. The inclusion of rimsulfuron (a.i. in Matrix herbicide) provides contact and pre-emergence control of grasses and broadleaf weeds, including glyphosate resistant marestail. Labeled crops include pome and stone fruits, tree nuts, blueberries and grapes. According to Shawn, "the improved management of marestail will be a good fit for some of our growers. Grape growers in particular have had trouble in the past with marestail control."

The U.S. Environmental Protection Agency registered a new product on March 11 for apple and pear thinning. It is being manufactured by ADAMA under the trade name Brevis SG. The active ingredient is metamitron, a chemical thinning agent that works by inhibiting photosynthesis (photosystem II pathway) and causing temporary stress. The reduction in photosynthesis results in reduced carbohydrate partitioning to weaker fruits causing them to detach, leaving larger fruits which are stronger sinks for

resources. Application timing will be from late petal-fall (5-7 mm fruit) until 16-20 mm diameter. More information can be found in the EPA release notice which contains links to the registration docket. While this product is not currently registered for use in the state it may become available to Kentucky growers sometime in the future.

An online survey for the Non-insured Assistance Program (NAP) is now available. The Kentucky state Farm Service Agency (FSA) uses the price figures from last year's growing season to calculate the funding assistance that growers would receive if they experienced eligible losses in the current year. Based on survey results, UK Extension will send in averages for listed crops to establish price figures in case a grower does not have historical records of their own. Individual responses will remain confidential.

Upcoming Meetings

*Times are listed in Central Time (**CT**) or Eastern Time (**ET**) depending on location.*

Jun. 12 (Thursday). Illinois Summer Horticulture Field Day. 8:00 am – 3:00 pm **CT.** Flamm Orchards, 8760 Old Hwy. 51 N, Cobden, IL 62920. Will include a field tour of strawberry, peach, and apple plantings, and include discussions on production practices. Advance registration is $30 and includes lunch. To register and find more information, use this link. Questions: email Jenna Spychal, Summer Hort Field Day Coordinator, at jenna@jonamacorchard.com.

Jul. 22 (Tuesday). Horticulture Research Farm Twilight Tour. 6:00 – 8:00 pm **ET**. 4321 Emmert Farm Ln., Lexington, KY 40514. Come see the current work being done and talk with extension specialists and educators. Follow this link to register for the event.

Jul. 24 (Thursday). Purdue Small Farm Education Field Day. 8:00 am – 2:00 pm **CT**. Purdue Student Farm, 1491 Cherry Ln., West Lafayette, IN 47906. To register, use this link.

Aug. 3-6. Joint Conference of the Northern Nut Growers Association and the Chestnut Growers of America. The conference will be held jointly at Nash Nurseries (4975 W. Grand River Rd.) in Owosso and the Double Tree by Hilton (111 N. Grand Ave.) in Lansing, Michigan. Schedule TBD. To register, visit https://nutgrowing.org/annual-meeting-2025/. Contact nngacga2025@gmail.com if you have questions.

Sept. 9-11. 5th International Pawpaw Conference. Frankfort, KY. Schedule TBD. Contact: Dr. Kirk Pomper, kirk.pomper@kysu.edu, 502-597-5942, or Sheri Crabtree, sheri.crabtree@kysu.edu.

Sept. 12-14. Ohio Pawpaw Festival. Lake Snowden, 5900 US-50, Albany, OH 45710. For details about the event visit and for weekend ticket passes, visit https://ohiopawpawfest.com/. Schedule TBD.

Sept. 23 (Tuesday). KY Mechanical Weed Control Field Day. Schedule TBD. UK Horticulture Research Farm, 4321 Emmert Farm Ln., Lexington, KY 40514.

Jan. 11 – 13 (Sunday – Tuesday), 2026. Kentucky Fruit and Vegetable Conference. Mark your calendars, the Kentucky Fruit and Vegetable Conference returns to the Sloan Convention Center at 1021 Wilkinson Trace in Bowling Green, KY 42103. Note that the dates for the conference have been pushed back a week from previous years. Monday and Tuesday, January 12-13 are the main conference days with pre-conference sessions on Sunday, January 11. It is hoped that this change will increase flexibility for out-of-state and guest speakers. Conference sessions are still in the planning stages, so watch this space in future newsletters.

USDA Disaster Assistance Available for Orchardists and Nursery Tree Growers

Tara Vaughn, Extension Associate, Horticulture

Our hearts are with Kentuckians as many all over Kentucky begin to recover from the recent weather events. Losses have been seen in unimaginable ways, including in agriculture. If you are an orchardist or nursery tree growers and have experienced losses due to the natural disasters, you may be eligible for cost-share assistance through the Tree Assistance Program (TAP) to replant or rehabilitate eligible trees, bushes, and vines.

TAP is a program through the Farm Service Agency (FSA) which covers the crop but not the plants or trees in some cases. For TAP, an application must be filed within 90 days of the disaster event or within 90 days of the date when the loss of the trees, bushes, or vines is apparent. This program is designed to help producers recover from natural disaster events to ensure long-term viability of their agricultural operations.

Eligible applicants will be orchardists or nursery tree growers who produce annual crops for commercial purposes and have suffered losses due to natural disasters. Nursery trees include ornamental, fruit, nut and Christmas trees for commercial sale. Trees used for pulp or timber are not eligible. Growers must be able to provide verifiable documentation of the losses and of costs associated with replanting or rehabilitation.

Mortality loss on a stand of eligible trees, bushes, or vines is based on:

- Each eligible disaster event, except for losses due to plant disease
- For plant disease, the time period is determined by the FSA for which the stand is infected
- The loss must not have been preventable through reasonable and available measures
- The loss must be visible and obvious to the FSA representative
- If loss is no longer visible, FSA may accept other loss evidence and will determine whether that other evidence substantiates that an eligible loss due to natural disaster occurred
- In some cases, FSA may require information from a qualified expert to determine extent of loss in the case of plant disease or insect infestation

To qualify for TAP, eligible orchardists and nursery tree growers must:

- Have suffered more than 15% mortality rate (adjusted for normal mortality due to a natural disaster
- Have owned the eligible trees, bushes, and vines when the natural disaster occurred (not required to own the land on which the owned trees, bushes, and vines are planted)
- Replace eligible tree, bushes, and vines within 12 months from the date the TAP application is approved

If these eligibility requirements are met, TAP provides cost-share assistance of 65% of the actual cost of replanting destroyed trees, bushes, and vines and 50% of the actual cost of rehabilitation of damaged trees, bushes, and vines. Limited resource, socially disadvantaged, and beginning farmers may be eligible for up to 75% cost share. For more detailed enrollment instructions and to apply, you must visit your local FSA office and talk with an FSA representative.

Plant Disease Sample Courier Service, 2025

Julie Beale, Sara Long, and Jason Travis

Plant Disease Diagnostic Lab Staff, UKREC

Courier service for plant diagnostic samples from the UK Research and Education Center in Princeton to the Plant Disease Diagnostic Lab on campus in Lexington will begin on April 16 and run once a week through September. Samples should be dropped off at Jason Travis's office in Office Trailer A by **9 a.m. CDT on Wednesdays**.

Best wishes to all for a productive growing season!

Worker Protection Standards: Be Sure Your Ag Workers are Annually Trained

Ric Bessin, Extension Entomologist

Most pesticides we use on the farm are covered by Worker Protection Standards (WPS) regulations. With these pesticides there is an "Agricultural Use Requirements" box near the start of the Direction for Use section that outlines the requirements when these products are on farms, forests, or nurseries. This box states that in these instances, users must abide by all of

the WPS requirements. However, most of these WPS requirements are not listed on the label, but they are all required by law.

One of those requirements is annual training of your ag workers that will work within 1/4 mile (1,320 feet) of a field that in the past 30 days had a restricted entry interval in place. All workers must receive the WPS ag worker training before they go into these fields, there is no grace period (Figure 1). Employees handling pesticides require additional training as WPS Handlers. The requirements for training are very specific and the materials must be approved by the EPA. How many employers handle this is by using an approved WPS Worker or Handler video then answering questions their employees may have. This along with the WPS training record that must be completed will fulfill the annual WPS training requirement.

Figure 1. *Even ag workers that don't handle pesticides need to be trained and equipped to reduce exposure to pesticide residues. (Photo: Ric Bessin, UK)*

To get these materials, you can visit the Pesticide Educational Resources Collaborative (PERC) website. On the PERC website, they have a WPS standard compliance assistance library with prepared presentations and videos in several languages that have been approved by the EPA to meet these requirements. These materials are all free of charge. Some of the videos may be available through your local extension office as well.

Apple Scab Picking on Kentucky Apple and Crabapple Trees

By: Kim Leonberger, Plant Pathology Extension Associate and Nicole Gauthier, Plant Pathology Extension Specialist

Apple scab is the most consistently serious disease of homegrown apple and flowering crabapple in Kentucky. The most noticeable losses on apple result from reduced fruit quality and from premature drop of infected fruit. Scab also causes a general weakening of the host when leaves are shed prematurely. Summer defoliation of flowering crabapple due to scab invariably results in fewer flowers the next spring. Resistant cultivars and fungicides are available; however, sanitation is a critical step in prevention and management.

Apple Scab Facts

- Caused by the fungus *Venturia inaequalis*.
- The apple scab fungus overwinters in fallen leaves.
- Leaf symptoms begin as olive-green to brown spots (lesions) with indefinite, feathery margins (Figure 1) on upper and/or lower surfaces. As disease progresses, lesions become more distinct, develop a greenish-black, velvety growth, and then thicken, and bulge upward (Figure 2).
- Infected fruit develop symptoms similar to those on leaves. Older lesions turn dark brown to black, develop a corky ("scabby") appearance, and frequently become cracked as fruit enlarge (Figure 3). If infections occur on young fruit, uneven growth near "scabs" may cause fruit to be deformed.
- Heavily infected leaves and fruit may drop prematurely.
- Hosts include apple, crabapple, hawthorn, and mountain ash.
- Primary infection occurs during periods of continuous leaf wetness from bud break until 2 to 4 weeks after petal fall.

- Subsequent infections result from a second spore type (conidia) that are produced in lesions throughout the remainder of the season.

Figure 1. *Scab lesions initially have indefinite, feathery margins. (Photo: Kim Leonberger, UK)*

Figure 2. *Older foliar lesions become more distinct, develop a greenish-black, velvety growth, and then thicken, and bulge up. (Photo: Kim Leonberger, UK)*

Figure 3. *Older fruit lesions turn dark brown to black, develop a corky ("scabby") appearance, and frequently become cracked as fruit enlarge. (Photo: Kim Leonberger, UK)*

Management Options

- Select varieties that are tolerant or resistant to apple scab.
- Prune trees to improve air circulation.
- Maintain plant health with proper nutrition and irrigation practices.
- Destroy fallen leaves and fruit by burning or burying. Commercial orchards can mow or apply nitrogen to aid in breakdown of leaf tissues.
- Apple scab risk throughout the season can be determined by disease development models. Visit the UK Ag Weather Center site for additional information.
- Homeowners may apply fungicides containing copper, mancozeb, sulfur, or captan. Preventative application should begin at green tip (typically late March) and continue until 2 to 4 weeks after petal fall. Fungicides can also be used to treat infections after they occur (Note that fungicides are less effective when used in this manner). For additional information on homeowner management of

apple scab using fungicides please see *Backyard Apple Disease & Pest Management Using Cultural Practices (with Low Spray, No Spray & Organic Options)*.

- Commercial growers should refer to *Midwest Fruit Pest Management Guide* for recommended fungicides.

Additional Information

- Apple Scab (PPFS-FR-T-13): http://plantpathology.ca.uky.edu/files/ppfs-fr-t-13.pdf
- Fruit, Orchard, and Vineyard Sanitation (PPFS-GEN-05): http://plantpathology.ca.uky.edu/files/ppfs-gen-05.pdf
- Backyard Apple & Pear Disease, Pest, and Cultural Practices Calendar (PPFS-FR-T-21): https://plantpathology.ca.uky.edu/sites/plantpathology.ca.uky.edu/files/PPFS-FR-T-21.pdf
- Simplified Backyard Apple Spray Guides (PPFS-FR-T-18): http://plantpathology.ca.uky.edu/files/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/agcomm/pubs/id/id21/id21.pdf
- Commercial Midwest Fruit Pest Management Guide (ID-232): https://ag.purdue.edu/department/hla/extension/_docs/id-465.pdf

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