

Kentucky Fruit Facts

November-December 2024

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

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Fruit Crop News

Daniel Becker, U.K. Extension Associate

The stretch of unseasonably warm weather this fall is finally ending. When once days were in the 60's and 70's, now 40's are more common. If the weather forecast remains accurate, by Thanksgiving we could see lows in the mid-20's across the state. Strawberry growers should think about winterizing their plantings if they have not already done so.

It is best to wait until plants are well along in the process of cold acclimation before covering. Look for plants that have leaves attached to the crown that have begun to flatten and take on a dull green or greenish gray leaf cast. Applying protection too early will inhibit hardening, and the plants may not acclimate properly, increasing the risk of cold injury later. Generally, beds are covered sometime from mid-November to December in a normal year.

Matted row: Wait to apply straw mulch until after several freezes in the mid to high 20's. Soil temperatures in the upper two inches below 40°F degrees is another good indicator. Two to three tons of straw per acre is needed to create a cover 2-3 inches deep over the beds. When finished you should just be able to see some leaves poking through the straw.

Plasticulture: While the desired timing will vary based on grower philosophy, labor, plant quality, and site conditions, row covers can be applied when the average weekly air temp. stays below 50°F.

A 1.0-1.2 oz./sq. yd. weight is common when using only a single cover for overwinter protection.



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Upcoming Meetings

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

Dec. 10-12. Great Lakes EXPO. DeVos Place Convention Center, 303 Monroe Ave. NW, Grand Rapids, MI 49503. For more information, visit <https://glexpo.com/>.

Jan. 5-7, 2025. Kentucky Fruit & Vegetable Conference. Marriott Griffin Gate, 1800 Newtown Pike, Lexington, KY 40511. Pre-conference events will begin on Sunday, January 5, with educational sessions and trade show held on Monday and Tuesday, January 6 and 7. Further information can be found at <https://kyhortcouncil.org/kentucky-fruit-and-vegetable-conference/> and in the article immediately following this section. A mail-in registration form can be found on the last page of this newsletter.

Jan. 9-11, 2025. Southeast Regional Fruit and Vegetable Conference. 1 International Dr., Savannah, GA 31421. For registration and a conference schedule, visit <https://seregionalconference.org/>.

Jan. 14-15, 2025. Indiana Horticulture Conference & Expo. Hendricks County Fairgrounds, 1900 E Main St., Danville, IN 46122. For conference details and to register, visit <https://indianahortconference.org/>.

Jan. 23-25, 2025. Organic Association of Kentucky (OAK) Annual Conference. Kentucky State University Harold R. Benson Research and Demonstration Farm, 1525 Mills Ln., Frankfort, KY 40601. For more information and to register, visit <https://www.oak-ky.org/annual-conference>.

Jan. 28-30, 2025. Mid-Atlantic Fruit and Vegetable Convention. Hershey Lodge, 325 University Dr., Hershey, PA 17033. <https://mafvc.org/convention-details/>.

Jan. 29-31, 2025. From Food to Flowers: Illinois Everything Local Conference. Bank of Springfield Center, 1 Convention Center Plaza, Springfield, IL 62701. Those who plan to attend should register prior to January 17 to receive the pre-registration discount. <https://www.specialtygrowers.org/everything-local-2025.html>.

Feb. 3-6, 2025. North American Raspberry & Blackberry Association (NARBA) & North American Strawberry Growers Association (NASGA) Conference. OUTRIGGER Kona Resort & Spa, 78-128 Ehukai St., Kailua-Kona, HI 96740. The conference will start with an opening reception on Monday with general sessions on Tuesday and Wednesday. On Thursday an Island of Hawai'i agricultural tour will be offered. For details, visit <https://www.raspberryblackberry.com/conference/2025-kona/>.

Feb. 4-7, 2025. CiderCon. Chicago Hilton Hotel, 720 S. Michigan Ave., Chicago, IL 60605. For more details visit <https://ciderassociation.org/cidercon2025/>.

Feb. 12, 2025. Southern Illinois Fruit and Vegetable School. Doubletree Meeting & Event Center 222 Potomac Boulevard, Mt. Vernon, IL 62864. Program schedule TBD.

Feb. 13-15, 2025. Pick TN Conference. Franklin Cool Springs Marriott, 700 Cool Springs Blvd., Franklin, TN 37067. For a conference schedule or to register, visit <https://www.picktnconference.com/>.

Mar. 4-5, 2025. Indiana Small Farm Conference. Hendricks County Fairgrounds, 1900 E. Main St., Danville, IN 46122. Schedule TBD.

2025 Kentucky Fruit and Vegetable Conference

The [2025 Kentucky Fruit and Vegetable Conference](#) is Monday and Tuesday January 6-7, 2025 with pre-conference events on Sunday, Jan. 5 at the

[Marriott Lexington Griffin Gate Golf Resort & Spa](#) in Lexington, KY.

This premier, state-wide event annually brings together approximately 600 growers, researchers, and technical support providers. The conference is devoted to fruit, vegetable, and cut flower production, handling, harvesting, marketing, storage, and related topics. The conference kicks-off with pre-conference events including a Farm Food Safety Plan Workshop, the Bringing the Farm to School Grower Training, and a Farmers Market Short Course. The main conference program has more than 20 different educational tracks with more than 70 speakers. The trade show offers more than 60 vendors featuring horticulture products and services.

Registration

Registration allows entrance to all conference sessions and includes free lunch on both days! The online and mail-in early bird registration price of \$80 per attendee ends on Friday, December 20, 2024. After that, the price of online and on-site registration will be \$100 per attendee. So don't wait! Follow this [link to register online](#)! For mail-in registration and conference details including the conference program, visit the [meeting webpage](#).

And don't forget to book your [hotel room at the special group rate](#)! A single or double guest room rate is only \$119.00 per night and includes two breakfast vouchers per room per night.

Beginning Farmer Scholarships Available!

[Conference registration scholarships](#) are being offered to help Beginning Farmers attend this conference for the first time. These scholarships are available on a first come first served basis. Preference will be given to commercial farmers with less than 10 years of farming experience and to those who have participated in beginning farmer workshops and classes. The scholarship does not cover hotel accommodation.

For more information about the conference, any of the pre-conference workshops, registration, or scholarships, email dakota@kyhortcouncil.org.

Results from a Peach and Nectarine Cultivar Trial at the UKREC, Princeton, KY

Daniel Becker, Extension Associate, Vegetable and Small Fruit Crops, University of Kentucky

Five named nectarine and six named peach cultivars from the University of Arkansas System Division of Agriculture were planted in November 2015. The cultivars were bred by John Clark at the Arkansas Agricultural Experiment Station at Clarksville. ‘Redhaven’ and ‘Contender’ were included as industry standard cultivars for comparison. The trial consisted of two trees of each cultivar planted in a non-replicated design with 18-feet between trees in-row and 20-feet between rows. Trees were trained to an open center vase canopy shape. Cultural and pest management practices followed industry standards recommended for Kentucky.

Productivity was inconsistent throughout the duration of the trial. Though 2018 was the first planned

harvest (based on commercial expectations), yield data was unable to be collected until 2021. Ongoing problems that impacted yield included wildlife, such as deer, racoons, and birds which would eat and peck fruit prior to being fully ripe. Frosts and freezes in April frequently thinned blossoms and reduced fruit set. Many of the cultivars in the trial are early blooming which makes them more susceptible to frost losses. ‘Redhaven’ and ‘Contender’ were slightly more consistent in terms of productivity but yields still did not approach what is considered commercially acceptable. Of the nine years the trees were in the ground, 2021, 2022, and 2024 were the only years that we were able to collect data from all or most of the cultivars along with their ripening dates and percent soluble solids readings (Table 1).

Yield was high in 2021, and some cultivars overset even with proactive thinning. This negatively impacted fruit size, especially for the earliest maturing cultivars. An increase in fruit size was noticeable the following year (2022) on some cultivars when yields were reduced by a spring frost/freeze. ‘Westbrook’ and

Table 1. Harvest data from peach and nectarine cultivars at the UKREC, Princeton, KY.

Cultivar ¹	Harvest Dates		Yield ² (lbs./tree)		Fruit wt. (g/fruit)		Soluble solids ³ (%)	
	2021-22	2024	2021-22 Cumulative	2024	2021-22 Average	2024	2021-22 Average	2024
Nectarines								
Westbrook	13-15 Jun.	6 Jun.	54.1	19.6	87	114	14.5	13.3
Arrington	21-22 Jun.	12 Jun.	49.5	30.5	76	106	14.6	13.0
Bradley	29-30 Jun.	20 Jun.	65.7	11.6	112	145	13.7	11.1
Amoore Sweet	29 Jun. – 2 Jul.	25 Jun.	60.3	15.0	129	162	14.1	12.8
Bowden	4-5 Jul.	25 Jun.	85.8	22.3	112	159	14.0	12.4
Peaches								
White Rock	6 Jul.	27 Jun.	64.2	4.6	133	141	11.9	10.0
Redhaven	5-6 Jul.	27 Jun.	82.3	24.1	147	163	12.4	12.6
Souvenir	5-8 Jul.	27 Jun.	78.2	29.0	119	170	12.5	10.9
White Cloud	29 Jun. – 7 Jul.	27 Jun.	139.5	2.1	183	173	12.3	10.3
Contender	16 Jul.	12 Jul.	92.0	15.0	154	167	10.5	11.8
White Country	14-16 Jul.	10 Jul.	133.5	19.3	152	223	12.1	11.6
White River	23 Jul.	18 Jul.	117.3	1.8	172	200	10.4	12.6
White Diamond	28 Jul.	22 Jul.	124.5	23.7	189	210	11.1	11.6

¹Numbers for Amoore Sweet, Contender, and White River reflect results collected from a single tree, out of two planted in November 2015.

²White Rock, Contender, White River, and White Diamond did not have any harvestable fruit in 2022.

³Measured as °Brix of juice extracted from two sides per fruit from a 10-fruit sample in 2021 and a three-fruit sample per tree in 2022 and 2024.

‘Arrington’ were particularly responsive with a 76% and 34% increase in weight. Both ripen early, and proactive thinning is necessary to ensure adequate fruit sizing prior to the start of pit hardening. Biennial bearing may have also contributed to reduced fruit set across all cultivars in 2022, though, stone fruits are less prone to this condition compared to apples and pears. Flavor and eating quality were generally good in both 2021 and 2022, regardless of yield.

Yields were again low in 2024. A mild January and February advanced bud break which led to flower kill during a mid-March freeze. Similar conditions in 2023 caused a complete crop loss for the year. ‘White Rock’, ‘White Cloud’, and ‘White River’ were among the earliest to reach 50% bloom (assessed March 4) and thus were in full bloom on March 18 and 19 when over-

night lows dropped to 26°F and 22°F. Frosts on April 5 and 6 caused further thinning. Fruit weight continued to increase for all cultivars except ‘White Cloud’ which experienced a slight decrease in fruit size. Most of the fruits for this cultivar were harvested from the basal portion of shoots where the only remaining viable flowers were located. In general, basal fruits tend to be smaller than those which develop in the mid-shoot section and towards the apex.

Fruit soluble solids (sugars) readings were lower than in previous years. Frequent rainfall throughout May and into early June diluted sugar accumulation ahead of harvest. Flavor was noticeably diminished which led to poor eating quality for most cultivars (Table 2). ‘Westbrook’, ‘Redhaven’, and ‘Contender’ were the exceptions and maintained good

Table 2. Descriptive characteristics and notes of peach and nectarine cultivars.

Cultivar	Exterior color	Flesh ¹	Stone ²	Notes
Nectarines				
Westbrook	70-80% crimson red over golden yellow	Y, M	½ C	Soft when fully ripe, bruises easily. Good flavor and sugar-acid balance, semi-tart.
Arrington	40-50% mottle red blush over yellow	Y, NM	C	Firm when ripe. Mild flavor and acidity, mostly sweet.
Bradley	40-50% red blush over yellow	Y, NM	C	Firm when ripe. Mild flavor and acidity, mostly sweet.
Amoore Sweet	70-80% crimson red over orange	Y, NM	C	Firm when ripe. Sweet with very little detectable acidity. Mild, almost bland flavor.
Bowden	50-60% mottled red over cream-yellow	W, NM	C	Semi-firm when ripe. Mildly sweet with balanced acidity. Mild floral aroma.
Peaches				
White Rock	30-40% pink over light yellow	W, NM	C	Semi-firm when ripe. Low acid flesh, mild, almost non-descript aroma.
Redhaven	Deep red over yellow ground color	Y, M	F	Soft when ripe, bruises easily. Classic peach flavor, balanced sugar-acid level.
Souvenir	Crimson red over yellow ground color	Y, M	F	Soft when ripe, bruises easily. Low acid flesh is mildly flavored.
White Cloud	40-50% mottled red over cream-green	W, NM	C	Semi-firm, light yellow flesh streaked with red. Sweet with mild flavor.
Contender	80% crimson red over scarlet-yellow	Y, M	F	Semi-soft when ripe. Classic peach flavor with balanced sugar-acid level.
White Country	60-70% light red over yellow-green	W, M	F	Semi-soft when ripe. Very mild, low acid flesh, almost non-descript flavor.
White River	40-50% light red over light yellow	W, M	F	Soft when ripe, bruises easily. Mild floral aroma with moderate acidity to balance sugar.
White Diamond	70-80% pink blush over light yellow	W, M	F	Semi-firm when ripe. Very mild, low acid flesh, almost non-descript flavor.

¹Y = yellow, W = white, M = melting, NM = non-melting.

²1/2 C = semi-cling, C = cling, F= free.

flavor despite the difficult growing season. As in previous years a portion of the fruit harvested from ‘Amoore Sweet’ and ‘Bowden’ exhibited fruit cracking caused by excess moisture. This defect which negatively affects appearance and creates points of entry for fungal infections was not common among the other cultivars. Some split pits were observed each year in ‘Westbrook’, ‘Arrington’, ‘Bradley’, and ‘Redhaven’ but this usually did not affect more than 10% of the fruits harvested. Bird, Japanese, and green June beetle feeding were other injuries which consistently reduced marketable yields.

Cherry leaf spot (*Blumeriella jaapi*) and bacterial leaf spot (*Xanthomonas campestris* pv *pruni*) caused leaf drop of some cultivars in 2023 and 2024, most notably ‘Redhaven’ and ‘Contender’ which were partially defoliated by September each year. Both are considered to have moderate to good resistance to bacterial spot. Infection was not severe enough for fruit lesions to occur in any year during this trial. Bacterial leaf spot infection among the University of Arkansas cultivars was low as one of the primary criteria for this program was to select cultivars with resistance to this disease. No peach cultivars are known to have resistance to cherry leaf spot. High rainfall in July 2023 (11.2”) and May 2024 (8.9”) contributed to the spread and increased severity of these diseases throughout the growing season. Post-harvest pesticide sprays and canopy management for increased air circulation are necessary steps for adequate control.

Warmer winters are advancing flowering earlier into the spring season when there is an increased risk of harvest losses from otherwise seasonable frost and freeze events. High rainfall punctuated by extended periods of drought is also increasing in frequency during the summer months. This is causing consistent production of peaches and nectarines to become more difficult in Kentucky and throughout much of the upper south. Trials incorporating potentially adaptive cultivars will continue to be necessary in the future to support an ever-changing industry. Unfortunately, none of the cultivars in this trial performed well enough to recommend for commercial production or to justify further evaluation. As such, this will be the last year for data collection from trees in this trial and this, the final report.

Use Winter for Preventive Maintenance on Your Sprayers

By Ric Bessin, Entomology Extension Specialist

Once winter begins to wind down, growers need to get their equipment ready for the coming growing season. When it is time to begin spraying and planting, you don’t want to spend precious time fixing and repairing equipment. It is during this down time when you should do some routine maintenance on sprayers. Spray equipment in poor repair can lead to poor application, which will cost money.

Look for Leaks

Before you start, put on a pair of gloves to protect yourself from pesticide residues. Begin by filling your sprayer with clean water, but before you engage the pump, look for leaks from around the pump, hoses, strainers, and nozzles. Pay particular attention to the hoses, as these often show signs of wear sooner than other more durable parts. Besides obvious leaks from hoses, inspect hoses for cracking and signs of dry rot as these can burst when pressurized (Figure 1). Places where hoses might crimp with folding booms are prone to cracking as hoses age. Engage the pump and look again for leaks. Check the pressure gauge and test the cutoff valves to be sure they are working.



Figure 1. Crimps in hoses may lead to cracking (Photo: Ric Bessin, UK).

Scrutinize Strainers

The job of strainers is to keep gunk from reaching and plugging nozzles. With just routine use there can be significant debris buildup with the inline strainer from the tank or the individual strainers in front of each nozzle (Figure 2). Sometimes these can be cleaned with a soft brush, other times they need to be replaced.



Figure 2. Check strainers regularly and clean or replace them as needed (Photo: Ric Bessin, UK).

Next, the Nozzles

All nozzles wear over time. This leads to an increasing and irregular flow rate from nozzles and poor spray patterns. In place of uniform applications across a field, there may be streaks due to places of over and under applications. While some nozzle materials, such as ceramics and stainless steel, may be more resistant to wear, all nozzles will show signs of wear eventually. Sprays containing abrasive materials, such as wettable powders and flowables, cause more wear to nozzles. Before conducting a catch test, be sure each of the nozzles are of the exact same type and are

not mismatched. Start your sprayer with the clean water and observe the pattern from each of the nozzles; look for streaks and clogs. The pattern from each nozzle should be the same. Run a 30-second or 1-minute catch test for each nozzle, output from each nozzle should be within 5% of the average output from all nozzles. Nozzles that are worn or cannot be unclogged need to be replaced and the catch test repeated.

Regularly Recalibrate

Now that your sprayer is working properly, it needs to be recalibrated; new strainers and nozzles can change the spray output. Calibration should be done at a minimum of once a year, but for those who use a sprayer more frequently or after changing to different nozzles (going from flat fan to hollow cone, for example) recalibration must be done more often. Instructions for calibrating a sprayer are in the Recordkeeping Manual for Private Applicators (https://entomology.ca.uky.edu/files/2019_pesticide_application_record_keeping.pdf).

Receiving Fruit Facts on the Internet

By subscribing to the email notification service, you will receive an email announcement when each new issue is posted on the web with a link.

To subscribe, send an email message:

TO: listerv@lsv.uky.edu
SUBJECT: Fruit Facts
MESSAGE: subscribe KY-FRUITFACTS
Followed by a blank line

OR to unsubscribe, the lines:

Signoff KY-FRUITFACTS

Followed by a blank line

You should receive confirmation by return email. If you have a problem, or if you wish to communicate with a person about “fruitfacts”, the owner’s address (the TO: line of the message is: owner-ky-fruit-facts@lsv.uky.edu).



2025 KENTUCKY FRUIT & VEGETABLE CONFERENCE

JANUARY 6-7, 2025

PRE-CONFERENCE EVENTS JAN 5

MARRIOTT GRIFFIN GATE
GOLF RESORT & SPA

1800 NEWTOWN PIKE
LEXINGTON, KY

REGISTER TODAY AT
bit.ly/KyFruitVeg2025

APPLY FOR A
BEGINNING FARMER
SCHOLARSHIP AT

forms.gle/Jaz6V8UgMgaDdYAc6



MAIL-IN REGISTRATION - 2025 Kentucky Fruit and Vegetable Conference
Marriott Griffin Gate, Lexington, KY
January 6-7, 2025

Online preregistration: <https://kentuckyhorticulturecouncil.ticketspice.com/2025-kentucky-fruit-vegetable-conference-attendee-tickets>

Mark one: REGISTRATION
 I am not able to attend--please continue my membership(s) as listed below.

NAME (Please print) _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE: () _____ OCCUPATION/FIRM _____

E-Mail _____

Please List Name(s) of Additional Registrants: _____

I am interested in being considered as a board member in:
 KSHS (fruit growers) KVGA (vegetable growers)

Please let us know if you are a:

- Grower
- Extension Agent
- Commercial Pesticide Applicator
- Other

Please check if you are a US Veteran

What are your top 3 research needs?

1. _____
2. _____
3. _____

Registration is complimentary for students and children under 15 years of age. A SEPARATE FORM IS REQUIRED FOR EACH REGISTRANT EXCEPT FOR SPOUSE AND CHILDREN. Please copy form if needed. You can also print forms from the Conference website (<https://kyhortcouncil.org/kentucky-fruit-and-vegetable-conference/>) . Registration questions, call: 615-399-3632 or email: dakota@kyhortcouncil.org.

2025 MEETING REGISTRATION

Indicate the number of registrations and total amount.

	Number	Total
<input type="checkbox"/> Kentucky State Horticultural Society <i>annual membership in KSHS (fruit growers) & meeting registration</i>		
Number attending x \$80 each	_____ X \$80	_____
<input type="checkbox"/> Kentucky Vegetable Growers Association <i>annual membership in KVGA (veg growers) & meeting registration</i>		
Number attending x \$80 each	_____ X \$80	_____
<input type="checkbox"/> Organic Association of Kentucky <i>annual membership in OAK (organic growers) & meeting registration</i>		
Number attending x \$80 each	_____ X \$80	_____
<input type="checkbox"/> Conference Farm Sponsorship		
<i>Voluntary contribution toward Conference expenses (room rental, lunches, etc)</i>	_____ X \$125	_____
<input type="checkbox"/> Kentucky Horticulture Research Initiative		
<i>Voluntary, tax-exempt contribution to KHRI for industry research</i>	Write in donation _____	_____

TOTAL AMOUNT DUE

Please make checks payable to: KY Vegetable Growers Association (KVGA). Mail form and check to: Kentucky Horticulture Council, PO Box 21736, Lexington, KY 40522-1736.

Check # _____

To reserve a spot in one of the pre-conference workshops, please email dakota@kyhortcouncil.org

Please note that the event is in Lexington, KY in 2025 and lunches are included in the registration fee