Kentucky Fruit Facts

November - December 2021
http://www.uky.edu/hort/documents-list-fruit-facts

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Inside this Issue:

Note: We have ceased publishing Fruit Facts as a hard copy or mailed newsletter. If you would like to continue receiving Fruit Facts, please sign up for email delivery as described at the end of this newsletter or contact your County Extension Office to have them print a copy for you.

Fruit Crop News

Daniel Becker, U.K. Extension Associate

Another harvest season has come and mostly gone; how quickly the time passes! Apples are for the most part off the trees. A few of the latest cultivars may still be hanging around. I noticed several bins of 'Golden Delicious' and one that was probably 'Red Delicious' on a recent trip to a produce auction.

Here at the station the horticulture crew has been picking 'Aztec Fuji' from the old 2010 NC-140 rootstock trial. 'Fuji' is known for its large fruit size, firmness, and sweet, mild flavor. 'Fuji', really starts to develop character in October. Indeed, Hortfact-3000 lists its approximate ripening date as October 10.

The 'Aztec' part of the trademarked marketing name indicates that the trees are a selection or "sport" chosen and propagated for developing a more intense and extensive red surface coloration. Actually, it is a sport of a sport, having been selected originally from a 'Red Fuji' tree grown in New Zealand. It ripens at the same time as regular 'Fuji'.

For us at least, 'Aztec Fuji' never really develops an even, intense red coloration. The fruit are usually streaked, often with the yellow ground color peeking through, and sometimes are a bit orange. Nighttime temperatures in September and even in October are just too high, leading to less red pigment being retained in the skin. I suspect if we had the regular 'Fuji' the fruit would be even more yellow, which is why it is always a good idea to choose redder selections if given the choice.

Light exposure will also influence coloration. The two apples in the masthead were picked from the same tree. The red fruit on the left came from the outside of the canopy with direct sunlight. The yellow fruit on the right came from the interior of the tree near the trunk where it was consistently shaded. Both had similar varietal character of flavor, but the more highly colored fruit was noticeably sweeter. Pruning for canopy openness will positively affect fruit exposure as well as thinning to reduce competition will lead to larger and sweeter fruit.

Some good end of season chores include spraying for peach leaf curl, assessing the potential for vole damage, and winterizing spray equipment. Sprays for peach leaf curl can be made once the majority of leaves have dropped. A fall spray is often easier than trying to rush this task in the spring before bud swell. Pre-emergence herbicides can also be applied if you

have trouble getting them down early enough in the spring because of a heavy workload. Check for vole runs and holes around your planting, if any are seen it is likely that populations are high enough to warrant control. With the final spray complete it is time to winterize your sprayer. PennState Extension has a brief overview of the process: https://extension.psu.edu/late-fall-is-the-time-to-winterize-your-sprayers.

This is the last Fruit Facts Newsletter for the year. Best wishes!

Upcoming Meetings

All times EDT unless noted.

Nov. 15-20. NAFEX Virtual Conference. The North American Fruit Explorers will hold its annual conference online via Zoom. The year's theme is "Fruit Forward: Growing for Tomorrow". It will include 24 speakers in 12 sessions over six days. The conference is free for NAFEX members and only $19 for non-members. Visit https://nafex.org/ for more information.

Nov. 18. Warren County Virtual Specialty Crops Conference. Schedule TBD. Contact Kristin Hildabrand, Warren County Extension Agent for Horticulture for details: kristin.goodin@uky.edu or (270) 842-1681.

Dec. 7-9. Great Lakes Fruit, Vegetable & Farm Market Expo. The deadline for early registration is November 15 for lower registration fees and to receive name badges by mail. Rooms at local hotels are likely to fill up just as quickly, so book early if you plan to attend. Visit https://glexpo.com/ for registration and schedule information.

Dec. 15. Fairview Produce Auction annual grower meeting. Schedule TBD. Contact Kelly Jackson, Christian County, Extension Agent for Horticulture for details: kelly.jackson@uky.edu or (270) 886-6328.

Dec. 28. Vegetable, Fruit, and Nut Crops as part of the Reducing Risk: Specialty Crop Insurance Webinar Series. 12:30 pm. A schedule of live webinars and links to register or view recorded content are available at https://kyhortcouncil.org/cropinsurance/.

Jan. 2-4, 2022. Kentucky Fruit and Vegetable Conference. Schedule TBD. Sloan Convention Center, 1021 Wilkinson Trace, Bowling Green, KY 42103. Contact Kentucky Horticulture Council at 859-490-0889; Email: info@kyhortcouncil.org.

Jan. 5-7, 2022. Illinois Specialty Crops Conference. Like the KY F&V Conference, the Illinois Specialty conference is returning to an in-person format but will also have the opportunity to view live sessions remotely. Programs and registration details coming soon. Visit https://www.specialtygrowers.org/ for more information.

Jan. 7-8, 2022. Great Plains Grower Conference. Registration and conference information can be found at https://www.greatplainsgrowersconference.org/.

Jan. 16-19, 2022. North American Strawberry Growers Association Meeting and Conference. This year's meeting will be held in Nashville, TN. Registration and conference information can be found at https://www.nasga.org/n-american-strawberry-growers-conference.htm

Jan. 18-19, 2022. Indiana Hort Conference & Expo. Registration and conference information can be found at https://www.indianahortconference.org/registation/.

Feb. 1-4, 2022. CiderCon. The annual convention of the American Cider Association will be held in Richmond, VA at the Richmond Marriott hotel, 500 E Broad St., Richmond, VA 2319. Visit https://ciderassociation.org/cidercon2022/ for more information.

Feb. 21-24, 2022. North American Raspberry & Blackberry Conference. The conference will be held in Gaithersburg, MD as a hybrid event with both in-person and virtual sessions. The hotel, registration, and schedule information is available at https://www.raspberryblackberry.com/2022-north-american-raspberry-blackberry-conference/.

Mar. 12, 2022. Hopkins County Small Farm & Garden Conference. Schedule TBD. Contact Jay Stone, Hopkins County Extension Agent for Agriculture & Natural Resources for details: jstone@uky.edu or (270) 821-3650.

Apr. 5, 2022. Apple Grafting Workshop. Henderson County Extension Office, 3341 KY-351, Henderson, KY 42420. Schedule TBD. Contact Andrew Rideout, Henderson County Extension Agent for Horticulture for details: pandrewrideout@uky.edu or (270) 826-8387.

USDA Introduces New Insurance Policy for Farmers Who Sell Locally

By Eric Hansen, Legislative Affairs Specialist, U.S. Department of Agriculture

The U.S. Department of Agriculture (USDA) is rolling out a new insurance option specifically for agricultural producers with small farms who sell locally. The new Micro Farm policy simplifies record keeping and covers post-production costs like washing and value-added products. USDA's Risk Management Agency (RMA) created this new policy based on research directed by the 2018 Farm Bill, and it includes feedback from producers who grow for their local communities. The policy will be available beginning with the 2022 crop year. "We are excited to offer this new coverage for producers who work to provide their communities with fresh and healthy food," said RMA Acting Administrator Richard Flournoy. "USDA is focused on supporting local and regional food systems, and this new crop insurance policy is designed with this important sector of agriculture in mind." Read the full release here: https://www.rma.usda.gov/News-Room/Press/Press-Releases/2021-News/USDA-Introduces-New-Insurance-Policy-for-Farmers-Who-Sell-Locally.

MarketReady Fall Training Announcement

By Savannah L. Columbia, Extension Associate, UK Agricultural Economics

Our MarketReady Producer Training Program is offering three (virtual) training dates this fall for producers interested in expanding their farm operation and products to wholesale, retail and grocery, restaurant, farm to school, etc. Even if producers are just thinking about growing into these sales spaces, the MarketReady Training Program would be a nice way to dip your toes in and see what it's all about. Our virtual trainings are free and include a ton of material. Agents are also encouraged to join this training. Our training dates are November 1st at 6PM, November 4that 11AM, and November 5th at 11AM (all EST). All the training dates cover the same material, just offered at different times to hopefully offer a time that fits in everyone's schedule.

We will be following up this training program with a five week advanced topic series on Mondays – running November 8th though December 6th. These are 90 minute sessions intended to dive deeper into the topics we cover in the MarketReady Producer Training. These webinars are also free, and producers may choose to attend as many as they would like. While it is advantageous to attend all of them, we understand producers might feel confident in some of the topics and might not feel the need to attend addition training. Registration for these webinars can be found on the same registration page as our main producer training (https://www.uky.edu/marketready/upcoming-events).
More info about the MarketReady program can be found on our website: https://www.uky.edu/marketready/ or our Facebook page: https://www.facebook.com/marketreadytraining. If you have any questions about the program, dates, and times, etc. feel free to send me an email!

New Blackberry Cultivars from the University of Arkansas

By Daniel Becker and Chris Smigell, U.K. Extension Associates

Three new blackberry cultivars have been released from the University of Arkansas fruit breeding program in the past few years, 'Caddo' in 2018, 'Ponca' in 2019, and 'Prime-Ark® Horizon' in 2020. 'Caddo' and 'Ponca' are floricane (summer) bearing and have thornless erect canes. 'Prime-Ark® Horizon' is a primocane (fall) fruiting cultivar with thorny, erect canes. 'Caddo' and 'Ponca' are suitable for commercial sale and home garden use. 'Prime-Ark® Horizon' is best for home gardens where frequent insecticide sprays or covering with netting to exclude spotted wing drosophila (SWD) fruit flies from a planting with ripe berries is feasible. Promotional fliers for these and other U of A blackberry cultivars are available at https://aaes.uada.edu/fruit-breeding/blackberries/.

When choosing between cultivars, harvest season and length are always major considerations. The difficulty arises in taking information in nursery catalogues and fliers that are often by necessity vague and applying it locally. Such resources are at best general guides to potential harvest periods for new releases. Comparison with other cultivars that have been trialed in Kentucky is necessary to provide a

best guess as to when ripening will occur. It should be noted that crops ripen approximately a week earlier in Western and Southern Kentucky than they do in the Northern, Central, and Eastern regions of the state.

The UK Research and Education Center at Princeton, KY had a trial of erect thornless blackberry cultivars and published reports from 2014-2018 in the Fruit and Vegetable Annual Research Report. Most years, the cultivars were harvested over a four week period beginning June 16-20 and ending July 17-20. 'Natchez' ripened first, followed 3-4 days later by 'Osage', with 'Ouachita' another 2-3 days afterward (5-7 days after 'Natchez'). Comparing these results with the ripening information for 'Caddo' and 'Ponca' in their respective fliers. 'Caddo' should begin harvest two days later than 'Natchez' and two days before 'Osage'. 'Ponca' should ripen a few days earlier, with 'Natchez'.

Kentucky State University has ongoing evaluations of primocane bearing blackberries at their Research and Demonstration Farm in Central Kentucky. From 2017-2020, the combined floricane and primocane crops of 'Prime-Ark® Horizon' (evaluated as APF-268) and 'Traveler' were harvested from late June or early July through mid-October. Differences in the harvest periods of the cultivars trialed were not detailed in the research reports.

Primocane brambles are not generally suggested for commercial production because insecticide costs and low yields compared to floricane bearing types can make them uneconomical in most markets. One of the consistent problems we hear about in fall brambles is heavy infestations of SWD. Because of the high populations during ripening and long harvest period, many sprays are necessary for effective control. Weekly non-organic insecticide sprays, or more frequent organic spraying is necessary. Thus, it takes a premium market price to cover the insecticide costs necessary to harvest a full fall bramble crop.

While there is high consumer demand for pesticide-free or organic pesticide-treated fruit, the best insecticides are not organic. Insecticide recommendations are available in the 2021-2022 Midwest Fruit Pest Management Guide (ID-232). Tables on pages 161 and 162 show the effectiveness of various insecticides for controlling SWD.

SWD is also a problem for brambles ripening at the start of summer (June 21) and later in Kentucky. The earliest trap capture of SWD during monitoring surveys in 2013-2016 was May 19 to June 12 depending on the year and the county where traps were located (http://www2.ca.uky.edu/agcomm/pubs/PR/PR721/PR721.pdf). However, it takes time for the population to increase from the start of activity. Growing early-season cultivars like 'Caddo', 'Ponca', and others may limit the management necessary to control this pest. It is possible that much of the fruit will be harvested before SWD becomes a major problem for home gardeners' and smaller growers selling locally.

Many nurseries are licensed to propagate and distribute these cultivars and others released from the University of Arkansas breeding program. A list of nurseries and how to contract them is available in the Fruit and Nut Cultivar Nursery Sources – 2020 (Hortfact-3002), https://www.uky.edu/hort/sites/www.uky.edu.hort/files/documents/HortFact_3002_2020.pdf. A link to an interactive map of is on the CCD website, https://www.uky.edu/ccd/maps.

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Spreading of the Brown Marmorated Stink Bug Across West and Central Kentucky: Distribution and Trends

By Armando Falcon-Brindis, Entomology Research Analyst, and Raul T. Villanueva, Entomology Extension Specialist

Stink bugs in Kentucky

Every year, fruit and vegetable growers in Kentucky usually face the attacks of two common stink bugs: the green stink bug (*Chinavia hilaris*) and the complex of brown stink bugs (*Euschistus* spp.–i.e., *E. variolarius, E. servus*), and since 2010 the brown marmorated stink bug (BMSB, *Halyomorpha halys*) (Figures 1A-C). These species are known to damage crops during summer and fall, causing reduced economic value.

Figure 1*. Common stink bugs found in soybean fields from west and central Kentucky. Green (A), brown (B) and nymphs of brown marmorated stink bugs (C) (Photos: Armando Falcon-Brindis, UK).*

Spreading context and scouting

Since our first survey of the expansion of the brown marmorated stink bug toward western Kentucky in 2020, growers and county Extension agents have been reporting increasing numbers of BMSB. We conducted standardized sampling (100 sweeps/field) in 34 commercial soybean fields from 21 counties in western and central Kentucky. In the western region, the counties sampled were Fulton, Hickman, Carlisle, Ballard, McCracken, Graves, Calloway, Livingston, Lyon, Caldwell, Christian, Trigg, McLean, and Henderson, whereas in the central region, we sampled in, Daviess, Hancock, Breckenridge, Hardin, Warren, Nelson, and Fayette counties (Figure 2).

We focused on two aspects with the information obtained. First, we compared the proportion of the three most common stink bugs on soybeans: green, brown, and BMSB. Then, we examined whether the planting strategies (double crop vs. full season) could help explain the number of stink bugs. Tallies were conducted using sweep nets during August and September in 2020 and 2021.

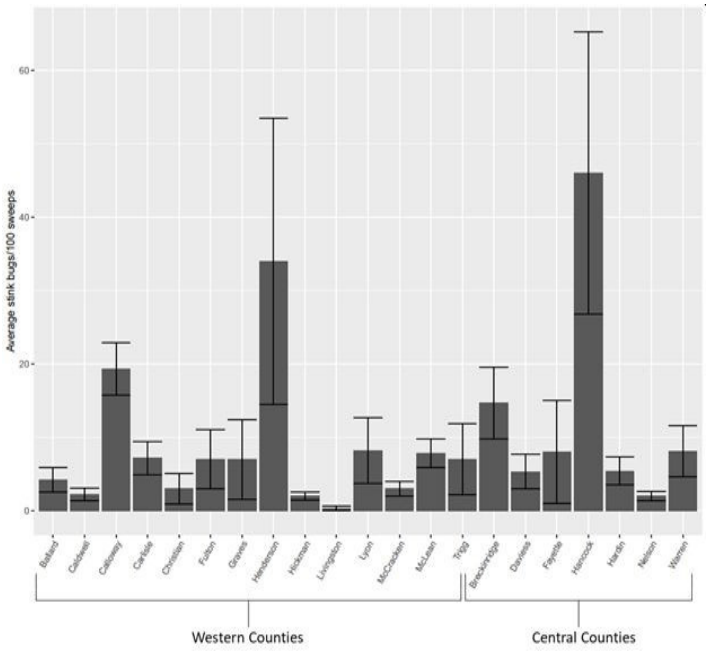


***Figure 2**. Numbers of stink bugs (Mean± SEM) across 34 commercial soybean fields in 21 counties. In Livingston County, we collected only one stink bug; the field might have been sprayed on days previous to when the tallies were conducted (Chart by Armando Falcon-Brindis, UK).*

Stink bug populations and species in 2020 and 2021

We collected 1,112 stink bugs from western and central counties (Figures 2 and 3). The proportion between the green, brown, and BMSB was statistically different ($\chi 2 = 265.2$, df = 2, $p<0.001$). The total number of stink bugs varied according to the planting strategy ($t = -3.01$, df = 129.2, $p = 0.003$), where full season fields had more stink bugs than those planted as double crops (Figure 4). Interestingly, the proportion of these stink bug species from central and western counties is closely related ($\chi 2 = 1.18$, df = 3, $p<0.552$). Although the most abundant species is the green stink bug in double crop systems, the brown marmorated stink bug seems to be starting to dominate among full season fields (Figure 3).

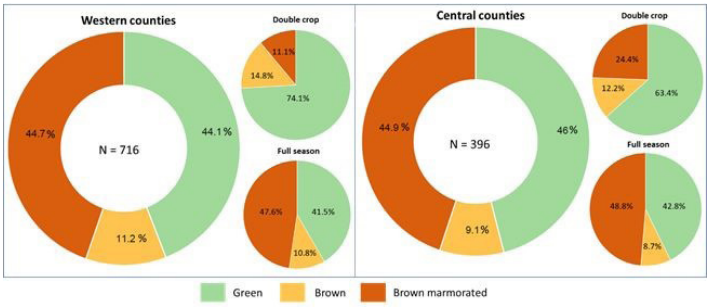


***Figure 3**. Percentages of the three most common stink bug species in central and western Kentucky (donut charts). The species proportions by planting strategy are displayed in the small pie charts. (Figure by Armando Falcon-Brindis, UK).*

The total proportion of stinkbugs did not vary between the western and central regions but between counties. The latter is probably the result of farmer management strategies and periods when we conducted the scouting (prior or post-application of insecticides). The highest number of stink bugs was found in Hancock County (Figure 2).

How fast is BMSB spreading?

Comparing 2020 and 2021, we noticed that BMSB moved fast, apparently from east to west or north to south. The BMSB has been present in Kentucky since 2010; however, in the western region of the state and prior to 2020, findings were sporadic, and in most cases, hitchhickers –a well-known behavior of this species. Moreover, we confirmed the presence of the BMSB in five new counties in the western region (Carlisle, Ballard, McCracken, and Livingston) and one central (Hancock) Kentucky county. In terms of the geographic spread of BMSB, its proportion is rapidly increasing when compared with 2020 (Figure 4).

The expansion of BMSB may bring new problems for fruit and vegetable growers in western Kentucky. As invasive species, their numbers can

increase as natural enemies are not as abundant in Kentucky as in native regions of Asia. In addition, BMSB is a nuisance for human dwellings, as they move into barns and houses to overwinter, staining walls, producing a foul smell, and/or causing allergies. During the week of October 11 to 15, 2021, one of the authors of this report (Villanueva) was finding between 15 to 32 BMSB on the outdoor side of his screen room. This is significant as he did not observe this from 2016 to 2019.

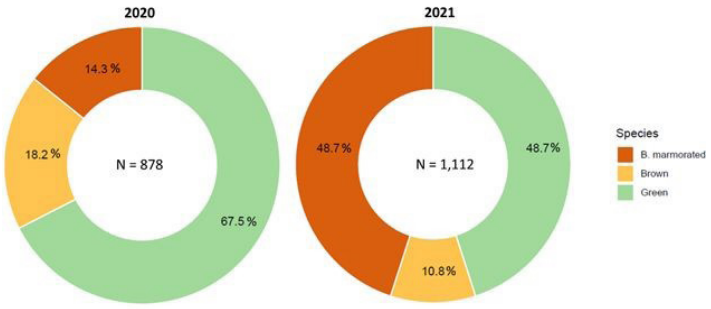


Figure 4*. Changes in the proportion of common stink bugs during 2020 and 2021 in western and central Kentucky. N = total stink bugs collected (Figure by Armando Falcon-Brindis, UK).*

Other Information that might Interest

Final tolerance rule on chlorpyrifos

The US Environmental Protection Agency (EPA) has declared a final rule revoking the use of chlorpyrifos, a common insecticide for foliar and soil-borne insect pests in the food system. This final rule is effective October 29, 2021. The tolerances for all commodities expire on February 28, 2022. Non-agricultural usages are unaffected by this jurisdiction, but food commodities are highly capable of transferring adverse effects to humans and should not come in contact with the chemical. More information on the past regulations regarding chlorpyrifos and actions among governmental organizations is available from the EPA at https://www.epa.gov/ingredients-used-pesticide-products/chlorpyrifos.

Spotted lanternfly found in Kansas

Spotted Lanternfly, native to East Asia, has been discovered in the Midwest after a presentation by a student at the Kansas State Fair. The insect can easily spread to new areas by laying eggs on vehicles or products that are transported, including lumber and stone. In large enough populations, spotted lanternfly can kill a variety of trees and vines, threatening vineyards, orchards, and the logging industry. A pest alert is available through the North Central IPM Center: https://www.ncipmc.org/projects/pest-alerts1/spotted-lanternfly-lycorma-delicatula/.

Best practices for using ReTain to manage apple harvest

Valent Biosciences has published new information on ReTain, a plant growth regulator (PGR). Their free technical manual details product application recommendations based on region, variety, crop load, and time of usage: https://www.valentbiosciences.com/cropenhancement/products/retain/. ReTain is a harvest management tool that is used to slow fruit ripening and is perhaps most well known informally as an apple “stop-drop spray”. Michigan State University Extension has developed a summary of the recommendations: https://www.canr.msu.edu/news/best-practices-for-using-retain-to-manage-apple-harvest?utm_source=cc&utm_medium=email&utm_campaign=extensiondigests

Takeaways from the 2021 Honeycrisp Virtual Meetups

A review of key questions answered by experts on Honeycrisp production is now available from Michigan State University Extension at https://www.canr.msu.edu/news/takeaways-from-the-2021-honeycrisp-virtual-meetups?utm_source=cc&utm_medium=email&utm_campaign=extensiondigests. This information is the product of a series of four virtual meetups held over the summer. A link to recordings of the webinars is included on the webpage. Discussed topics include crop load management, rootstocks, nutrient management, and harvest management.

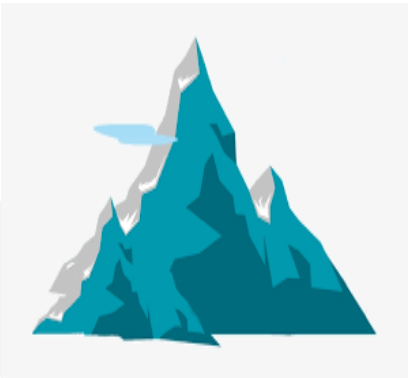
NARBA 2021-2022 Raspberry & Blackberry Nursery List.

The North American Raspberry & Blackberry Association has just recently released its new 2021-2022 Raspberry & Blackberry Nursery List. It includes all NARBA member nurseries and the raspberry and blackberry varieties they are offering for this fall and next spring. The list also welcomes several new nurseries this year. Ordering plants early is strongly recommended, as nurseries have been facing increased order volume and logistical complications during the pandemic. See the nursery list here: https://www.raspberryblackberry.com/wp-content/uploads/2021-2022-Caneberry-Nursery-List.pdf.

FRUIT & VEGETABLE HUMOR

Where do Apples like to go climbing?

Mount Fuji!



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