

Plant Protection and  
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*The purpose of our  
program is to:*

- *Protect the state's native and cultivated plants from the introduction and outbreak of harmful plant pests, including insects, plant diseases, weeds and other organisms.*
- *Provide inspection and certification services to ensure compliance with statutes and quarantines and to facilitate movement of plants and plant products to other states and countries.*
- *Manage pests of regulatory significance within the state.*
- *Ensure that plants, plant products, and seed offered for sale in Kansas meet the requirements of the Plant Pest and Agricultural Commodity Act, the Kansas Seed Law, the Kansas Noxious Weed Law, and the Commercial Industrial Hemp Act.*

## Updates

We missed you in 2020! Between moving our lab in early spring, staff changes, and COVID-19 restrictions, we did not compile a newsletter last year. We also missed seeing you at trade shows and educational events that were cancelled or switched to online formats.

Despite the challenges, we continued to certify plants and plant products for export and have continued other inspection and survey work. We are currently visiting greenhouses and gearing up for the busy spring season as are many of you. We hope to see you soon, either through inspections or educational events. Please reach out if you have questions or needs in the meantime.

Here are some highlights since our last newsletter:

- **Lab move** — KDA's Agricultural Laboratory relocated from Topeka to Manhattan in spring of 2020 and is now housed next to KDA headquarters. The ag lab conducts a wide range of testing for various programs within the agency.
- **Cherie Copeland retirement** — Cherie served as the south central area specialist for 22 years and retired from KDA in March of 2020.
- **Website revamp** — We improved navigation and made a few updates. Check it out at: [agriculture.ks.gov/PPWC](http://agriculture.ks.gov/PPWC).

## Reminders about shipping live plants

**Interstate shipments:** Require a Live Plant Certificate of Inspection issued by KDA which should accompany the shipments. Certificate acquisition requires one or more inspections per year depending on quantity and nature of shipments. Non-certified shipments may be held or destroyed by shipping companies or other states' plant protection agencies out of concern for accidental transport of exotic pests.

Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Washington have special restrictions on shipments of live plants from Kansas because of Japanese beetle. They prohibit certain items and require compliance agreements, extra documentation, pre-notification and/or treatment.

The National Plant Board offers these resources for domestic shipping guidelines:  
U.S. Domestic Japanese Beetle Harmonization Plan: [nationalplantboard.org/documents-and-policies/japanese-beetle-harmonization-plan/](http://nationalplantboard.org/documents-and-policies/japanese-beetle-harmonization-plan/).  
Summaries of state quarantines and regulations: [nationalplantboard.org/laws-and-regulations/](http://nationalplantboard.org/laws-and-regulations/)

**International shipments:** Also require a Live Plant Certificate of Inspection. May require a Phytosanitary Certificate, Import Permit, and/or special testing, depending on the country. Contact your area plant protection specialist for guidance well in advance of shipping to ensure requirements can be met.

# Watch for Ramorum blight in perennials and shrubs this year

Gaelle Hollandbeck, Plant Pathologist

*Phytophthora ramorum* was confirmed in 2019 on rhododendrons sold at various retail locations across the U.S., including stores in Kansas. This was the first known introduction of *P. ramorum* into the state.

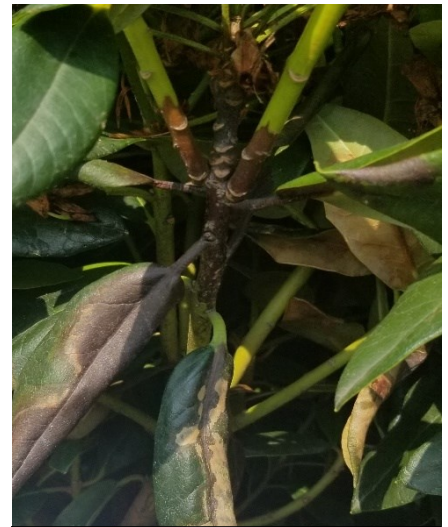
Ramorum blight, also known as Sudden Oak Death, is a disease caused by the water mold *Phytophthora ramorum*. Sudden Oak



Leaf scorch and blight on rhododendron

Death is the name given to the disease when it affects oaks. Ramorum blight is the name given to the disease when it affects non-oak species including azalea, bay laurel, camellia, lilac, pieris, rhododendron, viburnum, and many other native and cultivated plants. Ramorum blight is non-lethal but contributes to the spread of sudden oak death.

On species other than oak, *P. ramorum* causes leaf scorch, foliar blight, and stem cankers. On oaks, *P. ramorum* infection causes cankers on the trunks of susceptible species and subsequent decline. Cankers have defined margins and a reddish-brown, "bleeding" appearance. Tanoaks and oaks in the red and intermediate groups are susceptible.



Stem canker on rhododendron

The pathogen survives in infected soil, plant tissue, and water. It develops most favorably during wet, rainy conditions. It spreads short distances by splashing rain and irrigation water, in contaminated soil, and on contaminated clothing or equipment. It spreads long distances via interstate nursery trade.

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# Hemp in Kansas: Update

Jason Teal, Industrial Hemp Technician, and Braden Hoch, Industrial Hemp Supervisor

After the passage of the Alternative Crop Research Act in 2018, the Industrial Hemp Research Program was established in February 2019 to license industrial hemp growers, distributors, and processors in Kansas.

By the end of each growing season, 190 (2019) and 207 (2020) growers were licensed. For 2019, in acres of industrial hemp, approximately 5,800 were licensed, 2,800 were planted, and 1,800 were harvested. However, 2020 saw drastic percentage changes, as roughly 10,000 acres were licensed, 4,000

acres were planted, and 800 acres were harvested.

Diverse factors such as market price, crop surplus, extreme weather, producer constraints, and the impact of COVID-19 potentially resulted in the change in licensed acres, planted acres, and harvested acres from 2019 and 2020.

Of the planted acres, 54 (2019) and 34 (2020) acres tested noncompliant (> 0.3% THC). 890 (2019) and 3,167 (2020) planted



Floral material production

acres were nonyielding or failed to produce a crop.

In 2020, approximately 98% of the planted acreage was for floral material (cannabidiol or other cannabinoid production), an increase of roughly 8%



Fiber production

acreage from 2019. While seed, grain, floral, and fiber product were not differentiated in 2019 and 2020 reporting, product also saw -15% change.

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## Recent detections of invasive insect pests

K. Taro Eldredge, Entomologist

Invasive species are an ongoing issue that must be continuously addressed, and Kansas is no exception. Through our efforts to protect the interests of the state's native and cultivated plants, KDA has intercepted several invasive species new to the state of Kansas. While these invasive species are either newly established with a limited distribution or interceptions from contaminated imports, it is imperative that growers are aware of these new and potential threats to protect and promote their operations. Over the last couple of years, KDA has detected crapemyrtle bark scale (*Acanthococcus lagerstroemiae*), Japanese maple scale (*Lopholeucaspis japonica*), and Ligurian leafhopper (*Eupteryx decemnotata*). These insects were covered in detail in our quarterly Entomological News and can be accessed online for further information. They are highlighted here for a brief lightning round of info.

### Crapemyrtle bark scale (*Acanthococcus lagerstroemiae*)

Crapemyrtle bark scale (CMBS) was initially detected in Richardson, Texas, a Dallas suburb, in 2004. Originally, specimens were confused with a related native species, azalea bark scale, *Acanthococcus azaleae*, which attacks azalea (*Rhododendron* spp.). However, *A. azaleae* are not known to attack crapemyrtle, and through a combination of molecular (DNA) and anatomical data comparisons, the specimens were re-identified as *A. lagerstroemiae*.

Due to the popularity of crapemyrtle as a woody ornamental, CMBS has rapidly spread throughout the southern U.S. via human transportation. As of August 2019, CMBS was recorded in 12 states in the Early Detection & Distribution Mapping System. The states are Alabama, Arkansas, Georgia, Kansas,

Louisiana, Mississippi, New Mexico, North Carolina, Oklahoma, Tennessee, Texas and Virginia. In part due to their rapid spread, CMBS was declared one of the top nine pests in 2015 by Greenhouse Growers Magazine.

CMBS was intercepted in Kansas for the first time in 2019 at a box store infesting crapemyrtle, likely from Texas. It is currently unclear if they are able to survive Kansas winters, but they are known to withstand Arkansas winters so it is a possibility.

For more information please visit: [https://agriculture.ks.gov/docs/default-source/pp-insect-reports/entonews\\_66\(2\).pdf?sfvrsn=433189c1\\_0](https://agriculture.ks.gov/docs/default-source/pp-insect-reports/entonews_66(2).pdf?sfvrsn=433189c1_0)

### Japanese maple scale (*Lopholeucaspis japonica*)

A new adventive invasive armored scale insect (Diaspididae), Japanese maple scale (*Lopholeucaspis japonica*), was detected at multiple Kansas nurseries for the first time on Japanese maple (*Acer palmatum*) and Japanese zelkova (*Zelkova serrata*) in 2019.

Japanese maple scale (JMS) was initially detected in Connecticut in 1914 and is now known in 19 states and the District of Columbia. The states are

Alabama, Connecticut, Delaware, Georgia, Indiana, Kansas, Kentucky, Louisiana, Maryland, Missouri, Nebraska, North Carolina, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Tennessee and Virginia.

As with all armored scales (Diaspididae), JMS does not feed on vascular tissue (i.e. phloem), rather they target individual mesophyll cells and empty their contents via mechanical cell lysis. Because armored scales do not feed on large quantities of phloem in order to obtain limited amino acids (they also harbor symbiotic bacteria that augment phloem nutritional deficiencies), armored scales like JMS do not produce honeydew. Therefore, sooty mold is not a concern with JMS,



JMS on Japanese maple trunk



CMBS on  
crapemyrtle stems

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## Check the test date of grass seed

Bob Buhler, West Area Specialist

The test date on a seed label is the date the seed was evaluated for germination and other characteristics such as purity, presence of weed seed, etc. In Kansas, seed may only be offered for sale for 9 months after the month it was tested.

Plant protection staff find two common problems in retail stores that sell grass seed:

1. Retailers store leftover seed beyond the test date expiration.
2. Distribution centers send retailers grass seed that has already expired.

**For problem 1**, be sure to rotate your stock when fresh seed arrives. We find many instances where fresh

bags of seed are placed on top of older bags of seed. Eventually many of these bags will be out of date by several years. This is also a good time to check the test dates on your inventory; bags with expired test dates cannot be legally sold in Kansas. New seed tags can be requested and placed on bags.

**For problem 2**, a shipment arrives from the distribution center with grass seed that is already out of compliance with the test date. Some of these distribution centers are outside the state of Kansas and we have limited authority in addressing the problem. The distribution centers and our counterparts in the other

states have been contacted and the problem seems to persist.

For retailers with this issue, we suggest the following:

- Check grass seed test dates upon arrival and return it if not in compliance.
- Contact your sales representative and/or distribution center and demand the grass seed they send is compliant with the Kansas Seed Law.
- If you cannot return the seed, collect the manufacturer information, lot number, number of bags, etc. and request new seed tags to place on the bags. Grass seed that is out of date cannot be sold until it is retagged.

- If the problem continues, contact Plant Protection and Weed Control staff to visit your location to document the situation.

We appreciate the cooperation we have received since we took over management of the Kansas Seed Law in 2016. We would like to remind retailers that the law requires persons or businesses selling grass seed to register with KDA and renew the registration annually. The license year is September 1-August 31.

For more information and registration applications, visit [agriculture.ks.gov/seed](http://agriculture.ks.gov/seed).

Chart to Determine when a Seed Germination Test Date Expires				
Month seed tested	Non-compliant on		Month seed tested	Non-compliant on
January	November 1		July	May 1
February	December 1		August	June 1
March	January 1		September	July 1
April	February 1		October	August 1
May	March 1		November	September 1
June	April 1		December	October 1

*Per the Kansas Seed Law, agricultural seed (including grass seed) can only be offered for sale for 9 months after the month it was tested. It may be re-tested and re-labeled after that time.*

## Staff Highlight—Sarah Hawver

If you call or visit our main office in Manhattan, Sarah Hawver is likely to be the first person you reach within our program. Sarah joined KDA in the summer of 2019 and works as the

export coordinator and office manager for the Plant Protection and Weed Control and Grain Warehouse programs.

She moved to Kansas from Alabama a decade ago to

pursue a master’s degree in horticulture at Kansas State University and stayed in Kansas after graduation. She spent several years working in horticulture production and later,

landscape design.

Sarah enjoys spending her free time working in her garden and hiking with her husband Cole and her son Max.

## Beware of bacterial wilt in geraniums

Gaëlle Hollandbeck, Plant Pathologist

In April 2020, geranium cuttings from a U.S. owned production facility in Guatemala were shipped to commercial growers across the country and later found to be infected with bacterial wilt. This disease is caused by *Ralstonia solanacearum* race 3, biovar 2, a threatening pathogen of potato, tomato, and geranium.

A few growers in Kansas received potentially-infected cuttings. KDA staff worked with USDA to visit all affected growers. They found no signs of the disease on received material or nearby plants and all sampled material tested negative. However, all

cuttings of potentially affected varieties and all susceptible hosts within a certain distance of those cuttings were destroyed per USDA protocol.

Symptoms of bacterial wilt in geraniums include wilting of lower leaves, rolling of leaf margins, yellowing, and leaf necrosis. Stems and root tissue may also turn brown or black near the soil line.

To reduce risk of disease introduction, inspect geranium, potato, and tomato plants on arrival and check regularly for signs of disease as they grow. Disinfect tools between

plantings with a 10% bleach solution.

If you suspect bacterial wilt in geraniums, tomatoes, or

potatoes, contact your local county Extension office or the Kansas State University Plant Diagnostic Lab for testing.



Bacterial wilt may cause necrosis, leaf curl, and yellowing on geranium leaves. Credit: Margery Daughtrey, Cornell University, Bugwood.org

## Specialist News and Reports

The state specialists within our program provide annual or semi-annual updates in their field of study. These are available on our website through the links below. We are working to provide an option to subscribe to these newsletters online in the future.

**Entomological News:** [Agriculture.ks.gov/PPWC](http://Agriculture.ks.gov/PPWC) > Insects > Insect Survey and Reports

Or [agriculture.ks.gov/divisions-programs/plant-protect-weed-control/insects](http://agriculture.ks.gov/divisions-programs/plant-protect-weed-control/insects)

K. Taro Eldredge, State Entomologist, publishes the Entomological Newsletter multiple times a year to spotlight the myriad of activities and findings by KDA pertaining to insects as it relates to plant health in Kansas. Articles highlight annual insect pest surveys conducted by KDA which frequently involve various partner organizations and introduces various insect pests significant to Kansas. Often you can find notices of new state records, which will be informative for growers and producers in an ever evolving pest management landscape. You can be notified of the latest newsletters by emailing [taro.eldredge@ks.gov](mailto:taro.eldredge@ks.gov) with "SIGN ME UP ENTO" in the subject line.

**Plant Disease in Kansas:** [Agriculture.ks.gov/PPWC](http://Agriculture.ks.gov/PPWC) > Plant Diseases > Plant Disease Reports

Or [agriculture.ks.gov/divisions-programs/plant-protect-weed-control/plant-diseases](http://agriculture.ks.gov/divisions-programs/plant-protect-weed-control/plant-diseases)

Gaëlle Hollandbeck, state plant pathologist, publishes this newsletter several times per year highlighting the most recent issues in plant disease in horticulture and agriculture in Kansas. This has included topics such as Hosta Virus X, Alternanthera Mosaic Virus in purslane, Canna Yellow Mottle Virus in cannas, and pine wilt disease among other diseases. She also publishes an annual report on estimated yield loss due to disease in the wheat crop, a report based on data collected in surveys performed by KDA in conjunction with Kansas State University.

**Noxious and Invasive Weed Update:** [Agriculture.ks.gov/PPWC](http://Agriculture.ks.gov/PPWC) > Noxious Weed Control Program > Noxious and Invasive Weed Reports Or [agriculture.ks.gov/divisions-programs/plant-protect-weed-control/noxious-weed-control-program](http://agriculture.ks.gov/divisions-programs/plant-protect-weed-control/noxious-weed-control-program)

Scott Marsh, state noxious and invasive weeds specialist, publishes this newsletter several times per year highlighting the most recent issues in the management and control of weeds in Kansas. Topics include weed biology, control methods and weed identification.



## Ramorum blight continued from Page 2

Best management practices include inspecting host plants on arrival in addition to monitoring new and established plantings. Avoid overhead irrigation and promote good air circulation between plants. When pruning, disinfect tools between plants using 10% bleach solution.

To date, *P. ramorum* has not been detected outside of the retail locations where it was found in 2019 and is not believed to

have established in the environment. KDA staff are focused on early detection and exclusion of the pathogen. If Sudden Oak Death or ramorum blight is suspected, contact your local county Extension office or the Kansas State University Plant Diagnostic Lab for testing.

## Hemp: Continued from Page 2

With the passage of the Commercial Industrial Hemp Act (K.S.A. 2-3901) in 2019 and under the 2018 Farm Bill, KDA developed the Commercial Industrial Hemp Program to move beyond production on a research basis.

Subsequently, KDA submitted the plan to USDA -AMS for inclusion into the

U.S. Domestic Hemp Production Program. USDA approved KDA's plan and it was implemented in February 2021.

Under the commercial program, KDA only licenses hemp producers, otherwise known as growers; license applications are due March 15 each growing season.

Industrial hemp processing has been moved to the Office of the State Fire Marshal under a registry.

While no license is required to transport or distribute industrial hemp, all individuals should make certain unprocessed industrial hemp is accompanied by a signed bill of lading and that a

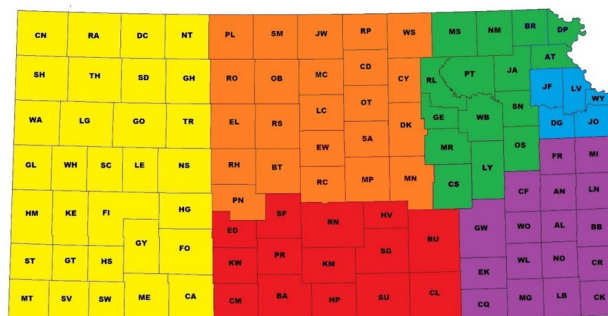
certificate of analysis is attached to the bill.

As a result of the USDA final rule on the establishment of the domestic hemp production program, KDA is hoping to have further revisions for the commercial regulations in place by the 2021 harvest season.

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**South Central**  
Vacant

like CMBS for example. Furthermore, armored scales including JMS are not prolific egg layers compared to other groups of scale insects, such as soft scales; armored scales typically lay fewer than 100 eggs versus 1,000 or more in soft scales.

Relatively speaking JMS are a minor pest, however they can locally become very problematic, especially in nursery settings. JMS is extremely polyphagous and has been reported from more than 83 species/hybrid cultivars across 49 genera and 27 families. JMS is known to feed on many popular nursery



Magnified view of JMS

and landscape woody perennial ornamentals including apples, ash, basswood, dogwoods, elms, hollies, honey locust, lilacs, maples, pears, privet, *Prunus spp.*, redbuds, willows and zelkovas, with preference for smooth-barked trees.

While JMS has been in the U.S. for over 100 years, it has been within the last ten years or so that nursery crop producers and landscape managers in the eastern U.S. have become increasingly concerned. Furthermore, new state records have been cropping up more frequently in recent years, likely due to the transportation of infested material, and it was first detected in neighboring Missouri in 2013. A stakeholder focus group has identified JMS as an emerging pest of concern alongside white peach scale (*Pseudaulacaspis pentagona*) in the southeastern U.S.

For more information please visit: [https://agriculture.ks.gov/docs/default-source/pp-insect-reports/66\(3\)a.pdf?sfvrsn=45508ec1\\_0](https://agriculture.ks.gov/docs/default-source/pp-insect-reports/66(3)a.pdf?sfvrsn=45508ec1_0)

**Ligurian leafhopper (*Eupteryx decemnotata*)**

A leafhopper (Hemiptera: Cicadellidae) that is a relatively new invasive to the U.S., Ligurian leafhopper (*Eupteryx decemnotata*) was detected in Kansas for the first time in March 2020. Ligurian leafhopper (LLH) was discovered in a greenhouse operation feeding on rosemary (*Rosmarinus officinalis*) that was likely shipped from growers in Florida for retail. Therefore, it is not believed to have established yet in Kansas.

LLH is native to Mediterranean coastal regions of France and Italy around the Ligurian Sea (hence the name). In the 1980s, LLH began expanding its range throughout Western Europe. The reason for this intracontinental expansion is unclear.

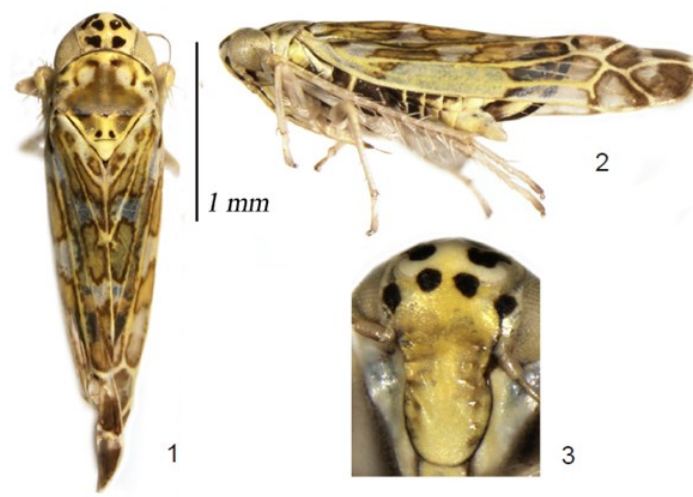
The presumed facilitators of the spread are human-mediated transport of infested plant material and increased planting of catnip (*Nepeta cataria*)—a preferred host—as an ornamental.

LLH was first intercepted from infested rosemary at a retailer in Florida in 2008, consisting of a shipment originally from California. Subsequently, multiple states have had positive records, but the extent to which they have established in various states is yet undetermined. However, it appears to be clearly established in California.

LLH is known to feed on a diversity of herbs, particularly those in the Lamiaceae family. In Central Europe the primary hosts are catnip and sage (*Salvia officinalis*), but there are at least ten additional hosts. LLH, like other Typhlocybinae leafhoppers, feed on the mesophyll, emptying the contents of palisade and spongy parenchyma. Individuals insert their piercing-sucking mouthparts (stylet) into leaf surfaces and probe around feeding on intracellular contents. After cellular content is removed, the damaged space becomes filled with air, resulting in characteristic whitish mottled feeding damage known as typhlocybid stippling.

Occasionally LLH densities can become high enough to significantly damage and kill plants, with leaf stippling fusing and leading to partial leaf necrosis. For cultivated aromatic herbs, the major concern is adverse effect on essential oil content. The related sage leafhopper (*Eupteryx melissae*) feeding on Turkish and Greek oregano (*Origanum onites* & *O. vulgare hirtum* respectively) was observed causing 28.8–34.8% reduction in essential oil content and discoloration of leaves. Despite potential damage, LLH is not known to transmit diseases like some other planthoppers.

For more information please visit: [https://agriculture.ks.gov/docs/default-source/pp-insect-reports/67\(2\).pdf?sfvrsn=13eb90c1\\_0](https://agriculture.ks.gov/docs/default-source/pp-insect-reports/67(2).pdf?sfvrsn=13eb90c1_0)



Ligurian leafhopper