CAPS Infrastructure Report

Year:	2013
State:	Kansas
Cooperative Agreement Name:	Infrastructure Project
Cooperative Agreement Number:	13-8420-1223-CA
Project Funding Period:	July 1, 2013-June 30, 2014
Project Report:	CAPS Infrastructure Report
Project Document Date:	July 1, 2013- June 30, 2014
Cooperators Project Coordinator:	Laurinda Ramonda
Name:	Plant Protection and Weed Control
Agency:	Kansas Department of Agriculture
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Quarterly Report	☐
Semi-Annual Accomplishment Report	☐
Annual Accomplishment Report	☒

A. Compare actual accomplishments to objectives established as indicated in the workplan. When the output can be quantified, a computation of cost per unit is required when useful.

- June 12, 2013 - Agreement finalized
- July 3, 2013 - Received funding

ACTIVITIES

Possible Meetings and Outreach Tradeshows as Per Workplan

Meeting or Tradeshow	Month Planned	Month Occurred	SSC Attended and Where
Great Plains Tree Pest Council	June/July	July 2013	No, Fargo, ND
Shawnee County Fair (outreach)	July	July 2013	Yes, Topeka, KS
Horticultural Inspection Society Meeting	October	October 2013	Yes, Lisle, IL
Central Plant Board Meeting	March	May 2014	No, Rapid City, SD (unable to attend due to family emergency)
State CAPS committee meetings	(1 time a year)	May 2014	Manhattan, KS
Shade Tree Conference (Kansas Arborist Association) - (outreach)	January	January 2014	Yes, Topeka, KS
Western Landscape and Nursery Tradeshow (outreach)	January	January 2014	Yes, Overland Park, KS
Great Plains Growers Conference (outreach)	January	January 2014	Yes, St. Joseph, MO
Topeka Garden Show (outreach)	February	February 2014	Yes, Topeka, KS
Pest workshops	various times of year		

- **Committee Service:**
  - **National CAPS Committee -** Central Plant Board State Survey Coordinator Representative – 2012-2014
- **Other Survey Work:**
  - **EAB Girdled Tree Monitoring** – August 27, 2013 – Greg Chrislip, Laurinda Ramonda – monitoring girdled trees for EAB
  - **EAB Girdled Tree Removal** – October 8, 2013 – Helped with peeling of girdled tree after removal in Wyandotte County.

- **EAB Girdled Tree Removal** – October 16, 2013 – Helped with peeling of girdled tree after removal in Leavenworth County.

OUTREACH AND EDUCATION

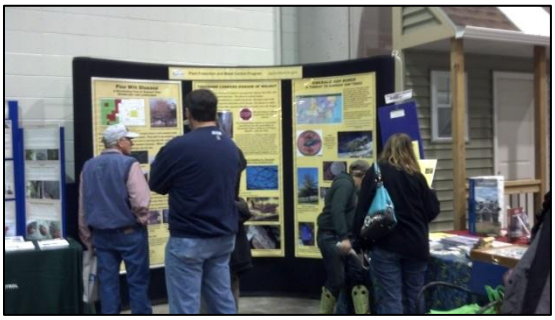
- **Shawnee County Fair** – July 25-28, 2013 – Educational Booth – Laurinda Ramonda, Jeff Vogel, Scott Marsh and Greg Chrislip

- **The Western Nursery and Landscape Association Tradeshow** – January 4-5, 2014 - Overland Park, Kansas – educational booth – Jeff Vogel, Jennifer Smith, Jeremy Maples, Laurinda Ramonda

- **Great Plains Growers Conference** – January 9-11, 2014 – St. Joe, Missouri – educational booth – Jeff Vogel, Jennifer Smith, Greg Chrislip, Laurinda Ramonda

- **Shade Tree Conference (Kansas Arborist Association)** – January 15-17, 2014 – educational booth – Laurinda Ramonda, Greg Chrislip, Speakers - Greg Chrislip, Jeff Vogel

- **Kansas Garden Show –** January 14-16, 2014 – Topeka, Kansas – educational booth – Jeff Vogel, Jennifer Smith, Scott Marsh, Greg Chrislip, Laurinda Ramonda

Kansas Garden Show Educational Booth

- **Topeka Zoo Earth Day Celebration** – April 19, 2014 – Topeka, Kansas – educational booth – Greg Chrislip and Laurinda Ramonda

  - **Interviews (TV/Radio/Newspaper/Magazines):**
    N/A

  - **Outreach materials (Pamphlets/ brochures/ posters):**
    N/A

  - **Publications:** (attached at end of report)

    - **Nursery Pest Newsletter** – Spring 2014

  - **Public Service Announcements (PSA):**
    N/A

MEETINGS

- **KDA Move Meeting** – July 16, 2013 – Office staff discussion about office personnel move to Manhattan.

- **Kansas City Metro Area Inspector Interview Team Meeting** – August 12, 2013

- **EAB Update Meeting** – August 21, 2013 – Manhattan, Kansas - Jeff Vogel and Laurinda Ramonda, Kansas Forest Service staff meeting – update on EAB

- **Kansas City Metro Area Inspector Interviews** – August 28, 2013

- **RIPSTOP 2013 KDA Functional Exercise Meeting** – October 1, 2013 – Meeting with KDA Emergency Management Coordinator.

- **RIPSTOP 2013 KDA Functional Exercise Meeting** – October 4, 2013 - KDA Functional Exercise ICS structure meeting.

- **RIPSTOP 2013 KDA Functional Exercise** – October 9-10, 2013 – Manhattan, Kansas - Planning Chief for KDA Functional Exercise.

- **Central Chapter Horticultural Inspection Society Meeting** – October 21-24, 2013 – Lisle, Illinois - Laurinda Ramonda gave report and update for Kansas.

- **After Action Report RIPSTOP 2013 KDA Meeting** – November 4, 2013

- **SPRO, SSC, SPHD, PSS Meeting** – November 20, 2013

- **KDA Plant Protection and Weed Control Staff Meeting** – December 9-11, 2013

- **Year End Performance Review** – December 17, 2013

- **Annual National CAPS Committee Meeting** – January 28-29, 2014 – Gainesville, Florida

- **KDA Plant Protection and Weed Control Staff Meeting** – February 24-26, 2014

- **Seasonal Employee Meeting** – May 2, 2014 – meeting with seasonal employee Jonathan Nelson - grape pest survey

- **KDA Forbes Field Move Meeting** – May 15, 2014 – Discussion about Forbes personnel move to Manhattan and reorganization in Forbes building.

- **KDA Fiscal Meeting** – May 16, 2014 – meeting with fiscal to discuss CAPS funding

- **Annual Kansas CAPS Committee Meeting** – June 18, 2014 – Manhattan, Kansas

- **Forbes Field Building Meeting** – June 26, 2014 – Topeka, Kansas

  - **Conference Calls:**

    - **Johnson County EAB Conference Call** – July 15, 2013 – KDA, KFS, Extension, KSU, county and city officials – quarantine and EAB find in Johnson County.

    - **National CAPS Committee Monthly Conference Call –** August 1, 2013

    - **KDA Plant Protection and Weed Control Monthly Conference Call** – August 12, 2013

    - **National CAPS Committee Monthly Conference Call –** September 5, 2013

    - **KDA Plant Protection and Weed Control Monthly Conference Call** – September 16, 2013

    - **Central Chapter SSC Conference Call –** September 16, 2013

    - **RIPSTOP 2013 KDA Functional Exercise Conference Call** – October 2, 2013 - KDA Functional Exercise Conference Call

    - **KDA Plant Protection and Weed Control Monthly Conference Call** – October 14, 2013

    - **National CAPS Committee Monthly Conference Call –** October 24, 2013

    - **KDA Plant Protection and Weed Control Monthly Conference Call** – November 12, 2013

    - **National CAPS Committee Monthly Conference Call –** November 14, 2013

    - **National CAPS Committee Monthly Conference Call –** December 5, 2013

    - **National 2014 EAB Survey Conference Call and Webinar –** December 18, 2013

    - **National CAPS Committee Monthly Conference Call –** January 9, 2014

    - **KDA Plant Protection and Weed Control Monthly Conference Call** – January 13, 2014

    - **Central Chapter SSC Conference Call –** January 22, 2014

    - **SPHD, SPRO, SSC Conference Call –** February 6, 2014 – Discussion about pre-award letters and CR partial funding

    - **National CAPS Committee Monthly Conference Call –** February 13, 2014

- **Tobacco Mosaic Virus Conference Call –** February 17, 2014 – TMV discussion with program about issues at green houses

- **KDA Plant Protection and Weed Control Monthly Conference Call** – February 10, 2014

- **SPHD, SPRO, SSC Conference Call –** March 4, 2014 – Discussion about CR partial funding for EAB

- **National CAPS Committee Monthly Conference Call –** March 6, 2014

- **Central Chapter SSC Conference Call –** March 14, 2014

- **EAB KC Metro Survey Conference Call** – April 1, 2014 – KDA, KFS – Discussion on setting girdled trees for survey

- **National CAPS Committee Monthly Conference Call –** April 3, 2014

- **National CAPS Committee Monthly Conference Call –** May 1, 2014

- **Central Plant Board State Survey Coordinator Breakout Session Conference Call –** May 6, 2014

- **KDA Plant Protection and Weed Control Monthly Conference Call** – May 12, 2014

- **KDA Plant Protection and Weed Control Monthly Conference Call** – June 9, 2014

- **Conferences:**
  N/A

- **Webinars:**

  - **State Employee Health Plan Webinar** – September 30, 2013

  - **Farmbill Webinar** – November 19, 2013

  - **Brown Marmorated Stinkbug Webinar** – February 12, 2014

  - **NAPIS 3.0 Data In: Add a Record Form and Uploading Excel Files** – March 19, 2014

  - **NAPIS 3.0 Data In: Creating Reports and Maps** – April 1, 2014

TRAINING

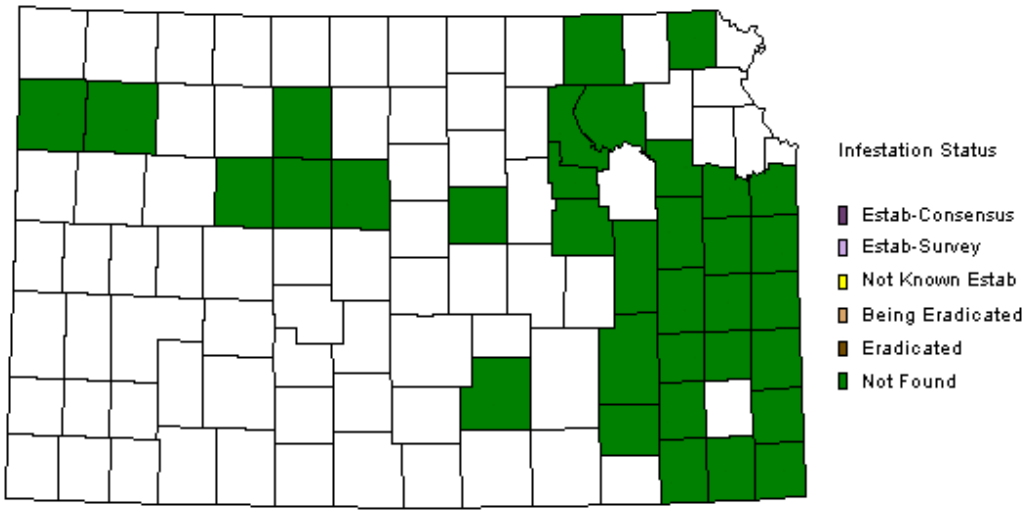
N/A

OTHER

- **Data entry –** entered data into NAPIS, IPHIS (when needed), RECS (state database) for surveys throughout survey season

Pest: GYPSY MOTH (NAPIS data)

	Positive	Negative
USDA-APHIS		
Allen	0	1
Anderson	0	1
Bourbon	0	3
Cherokee	0	6
Coffey	0	3
Crawford	0	5
Douglas	0	31
Elk	0	1
Ellis	0	1
Franklin	0	2
Geary	0	22
Greenwood	0	5
Johnson	0	115
Labette	0	2
Linn	0	1
Lyon	0	2
Miami	0	3
Montgomery	0	12
Morris	0	5
Osage	0	9
Riley	0	19
Rooks	0	4
Russell	0	6
Saline	0	15
Sedgwick	0	38
Shawnee	0	32
Sherman	0	2
Thomas	0	2
Trego	0	5
Wilson	0	2
Woodson	0	2
Data Source Total	**0**	**357**
STATE AG. DEPT.		
Brown	0	1
Douglas	0	2
Geary	0	2
Johnson	0	9
Marshall	0	1
Pottawatomie	0	1
Data Source Total	**0**	**16**
Report Total	**0**	**373**



This map only represents pest survey data submitted to the NAPIS database by participating states in the Cooperative Agricultural Pest Survey (CAPS) program with USDA, APHIS, PPQ.
Data is based on survey observation by calendar year.
CERIS does not certify the accuracy or completeness of this map.
"Survey in Progress" does not imply that all counties are expected to report.

B. If appropriate, explain why objectives were not met.*

C. Where appropriate, explain any cost overruns or unobligated funds in excess of $1,000. *

D. Supporting Documents

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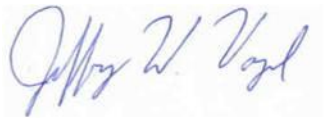
indicates information is required per 7 CFR 3016.40 and 7 CFR 3019.51

Approved and signed by:



September 16, 2014

_____ Date: _____

Cooperator

_____ Date: _____

ADODR

Kansas Department of Agriculture

Nursery Pest Newsletter

Plant Protection and Weed Control
Kansas Department of Agriculture
PO Box 19282, Forbes Field, Bldg. 282
Topeka, Kansas 66619
Phone: 785-862-2180 FAX: 785-862-2182
agriculture.ks.gov/divisions-programs/plant-protect-weed-control

Spring 2014

Greenhouse Diseases Control Starts Early

Jon A. Appel, State Plant Pathologist

Greenhouses will soon be filling up with the spring plants. What can you do now or think about doing as a grower and supplier of plants to keep plant diseases and associated insect vectors minimized? Remember Kansas has Plant Pest Freedom Standards that are enforced for greenhouse plants.

Reflect upon last years' production problems and take action to avoid those issues early on. Proactive management plans can be established to avoid common greenhouse problems that can repeat each year. Proactive management can prevent the need for high cost pesticide treatments and discarding plants.

The four general components contributing to a disease cycle are as follows: first, organism or pest is present; second, susceptible hosts, usually in a weakened condition; third, suitable environment conditions and fourth, time for the disease to manifest itself and increase in magnitude. Limiting or addressing one or two of these conditions can bring a successful growing season.

Three major groups of diseases in greenhouse production are damping off, viruses and leaf spots and mildew. Below is a description of each disease and some proactive measures to fend off these diseases.

Damping off: This is a disease complex is caused by two fungal genera, *Pythium* and *Phytophthora*, called water molds. This disease is the most common problem in greenhouse production and in retail locations. Symptoms include poor germination, rotted seedlings, poor growth, chlorosis and occasionally death of grown plants. Contributing factors are wet, cool soils (mixes) and slow growth. Spores rest in the soil and plant debris and can also come into a location through cuttings and on rooted plants.

Proactive measures: 1) raise benches off the ground and properly space to provide good air circulation, 2) plant high germination seed with a fungicide treatment, 3) create physical barriers such as gravel or ground cloths to separate plants from touching cold wet soils, 4) provide new pots or flats, 5) limit watering to mornings and early afternoons, 6) apply preventative fungicide treatments to susceptible plants such as vinca and geraniums, 7) control fungus gnats whose larvae feed on and wound the roots, 8) raise the temperature in germination rooms and 9) maintain good fertilization to promote rapid growth.

Kansas Plant Pest Freedom Standards: Less than 5% infection.

Viruses: Several viral diseases can get into greenhouse production sites and infected plants can exhibit necrotic line patterns or ring spots, mosaics, tissue distortion or malformation, color breaking and/or stunting. Symptoms are not always present or can fade out even though the virus is present making sanitation extremely important. Insects such as thrips, whitefly and aphids can transmit viruses from plant to plant and across different plant species. Viruses can be exposed to an operation by infected cuttings or plants and be spread by propagation or pruning practices from infected sap. Viruses overwinter in plants that are kept alive from a previous year or with weeds that grow inside (remember symptoms may not be apparent). Hobby plants and weeds serve as a reservoir for virus and insects. In addition, pesticides will not control virus infections directly.

A POTY virus infection of Lantana from a cutting source. Symptoms include distorted growth, mosaic, and stunting.

Proactive measures: 1) proper sanitation - control weeds in and around the greenhouse and dispose of overwintered plants to reduce the reservoir of potential disease, 2) purchase high quality cuttings, 3) insect control to limit spread of viruses insects, 4) establish a disinfecting program for propagative tools so sap transmission of disease is negated, and 5) inspect new plant arrivals for

viral and insect issues. If you had an inspection by the Kansas Department of Agriculture there was probably a report issued. Please review that report and if a virus was listed contact our staff person for additional help with the situation.

Kansas Plant Pest Freedom Standards: 0% infection.

Leaf spots and mildews: Leaf spots and mildews are diseases caused by either a fungi or bacteria. Leaf spots and mildews are associated with extended leaf wetness which allows the fungus or bacteria to grow. Spores of the fungus or bacteria are spread by air currents or splashing water. Fungicides can work well for these diseases when applied preventatively or early in the disease cycle. However, bacterial diseases do not respond well to pesticide applications. Spots, or blights, are usually scab like or are defined dead areas of leaf tissue and will increase over time. Mildews are powdery white growths on the upper and lower surface or downy white growths only on the lower surface.

Proactive measures: 1) resistant cultivars, 2) good air circulation, 3) limit leaf wetness by watering in the morning and early afternoon, 4) apply preventative fungicides, 5) proper spacing, 6) dispose of overwintered plants or plants with moderate infection, and 7) inspect plants when they arrive.

Kansas Plant Pest Freedom Standards: Less than 15% of the plants with less than 10% leaf severity.

Kansas Department of Agriculture hosts "Multi-State Inspector Training"

Bob Buhler, Western Kansas Plant Protection Specialist

Strike team in action

The Plant Protection Program and the Central Chapter of the Horticulture Inspection Society (HIS) hosted a multi-state inspector training in Ottawa, Kansas on August 19-21. Attendees came from North and South Dakota, Wisconsin, Nebraska, Missouri, Kansas and California. They received training in Systems Approach to Nursery Certification (SANC) from the National Plant Board and plant diseases and scale insects from Drs. Megan Kennelly and Raymond Cloyd of Kansas State University. They also participated in a mock emergency exercise for a nursery pest that was managed using the Incident Command System (ICS).

Group picture of ICS exercise

The goal of the SANC program and the multi-state inspector trainings are to foster a more uniform approach to nursery certification across the nation and to broaden the skills of the nursery inspector.

Hydrilla; a Weed to Watch for

Scott S. Marsh, State Weeds Specialist

Invasive species are not limited to range and pasture, or even to farms and yards. They are also found in aquatic environments. I am sure you have all heard about quagga and zebra mussels taking over the country's lakes and rivers, but plants can also have a devastating impact on the same water bodies.

Hydrilla (*Hydrilla verticillata*) was initially introduced into Florida in the late 1950s from Asia. It has become such a problem that it has been added to the Federal Noxious Weed List. It was, and still is, used as an ornamental aquarium plant. Its introduction into the wild was probably the result of an irresponsible aquarium owner dumping the contents of his or her aquarium into a lake or stream, allowing the plant to become established and start spreading. Since then, it has become established from coast to coast and from Maine to Arizona. It was first reported in Kansas in 2009 in a pond in Black Bob Park in Olathe.

Photo courtesy of Jon Rodgers.

Hydrilla is a submersed plant, which means the entire plant grows underwater, with long stems that branch apart and spread just under the surface. These stems can reach 25 feet in length and the plant can spread until it has grown across the entire surface. The leaves of the plant are strap-like with pointed tips and saw-toothed edges. They grow in whorls or groups of leaves growing around the stem, in groups of 4 to 8 and are joined directly to the stem. The space between the whorls can range from 1/8 inch to 2 inches.

Because it is adapted to grow in a wide variety of water quality conditions including both high and low nutrient, salt and light levels, and the fact that it can reproduce by re-rooting stem fragments, axillary buds on the stem and underground tubers, it becomes a serious problem to recreational and commercial boating, slows water flow and clogs irrigation canals and, most importantly, out competes

and shades-out important native species of plants. If a large infestation were to die out suddenly, its decomposition would remove most of the oxygen in the lake, causing the resident fish to die as well.

One of the most critical aspects of controlling Hydrilla is preventing its spread into new waters. This is an issue mainly because a single, small piece of a plant, carried inadvertently from one water body to another on a boat propeller, a fishing net or the tongue of a boat trailer can take root in the next lake visited, resulting in a new population and a new problem. Another, related method of spread for Hydrilla is the dumping of aquariums into lakes, ponds, rivers or ditches. The plants that were merely decorative in an aquarium in the house can become overwhelming problems in nature.

Once it has become established control is very difficult. Mechanical control is not recommended because it will usually result in plant fragments that can easily increase the distribution of the plant. Biological control, while available in some areas is not permitted in Kansas and its success has been fairly limited. This leaves chemical control. Imazamox, flurodone, endothol and copper sulfate offer differing levels of control and application restrictions. The city of Olathe has been using flurodone on the infestation in Black Bob Park and has seen the population decrease.

With any application of pesticides you are required by law to follow the label directions. Because Hydrilla is not a designated noxious weed in Kansas, you will not be able to use cost-share chemicals to treat it.

While much harder to find than it used to be, Hydrilla is still available for purchase in some markets and online as an aquarium plant. Please be conscientious about the plants you purchase for your aquariums, better yet use artificial plants, and never dump your aquarium into an outdoor water body, even if you are sure none of your plants are invasive. They could be carrying insects or bacteria that are.

If you find Hydrilla growing in Kansas, do what you can to control it and also call the Kansas Department of Agriculture at (785) 862-2180 to report it.

Going Digital to Identify Emerald Ash Borer

Greg Chrislip, State Entomologist

Kansas and Massachusetts received a farmbill grant to work with Dr. Amy Roda (USDA–APHIS–PPQ–CPHST) to collaborate on a new approach to identify emerald ash borer (EAB) in the field. This was a pilot project using handheld digital microscopes.

Currently when a suspect EAB is located in a new county, the specimen is collected and mailed to a USDA identifier. The microscope project is being developed to identify EAB specimens in the field to eliminate look-a-like species of beetles. Pictures taken with the microscopes allow the images, while in the field, to be immediately sent to an identifier.

If the specimen is determined by the identifier to be a potential new county record, the specimen is collected and sent to the identifier for further confirmation. Non-target beetles are left on the trap or discarded. The hope is to quickly identify EAB in the field, and eliminate collecting beetles that do not fit the EAB criteria.

Field Application of the Digital Microscope: Greg Chrislip, State Entomologist PPWC and Amy Roda, PhD, Supervisory Entomologist USDA APHIS PPQ CPHST

Kansas has also used the camera to identify pests of grapes, unknown Lepidoptera and unknown foliar feeding beetles. These images were sent to other labs such as K-State and identification occurred usually within hours of submission.

Trapping and Survey Programs

The national trapping survey for emerald ash borer in 2013 consisted of setting 375 traps throughout Kansas. Of these, 65 were set by the KDA and 310 were set by USDA-APHIS-PPQ. The state trapped Butler, Jewell, Leavenworth, Neosho, Osborne, Pottawatomie, Russell, Smith and Shawnee counties. The traps were to be put up in USDA pre-planned areas. If those areas were not suitable, then the traps were moved to campground sites or other high risk locations. The traps were up from March until August. Emerald ash borer was found in three traps in Wyandotte and one trap in Johnson County. These traps were placed and monitored by USDA-APHIS-PPQ. For information on the emerald ash borer, visit: www.emeraldashborer.info

Farmbill funding was acquired for surveys to trap for khapra beetle, walnut twig beetle and a grape pest survey.

The khapra beetle survey trapping occurred in August and September; two traps at 35 international stores and 4 commercial storage facilities in Manhattan, Topeka,

Lawrence, Salina, Junction City, Kansas City and Wichita were set. All traps were negative.

Trapping for the walnut twig beetle consisted of finishing up the survey that started in the fall of 2012 which occurred in 30 northeastern counties in 117 locations with 216 traps set. The survey for 2013 occurred in the southeastern part of the state at 35 sites in 12 counties. Both of these surveys took place simultaneously from June to August. All traps were negative.

The grape commodity survey started at the end of May and all traps were removed by the first week in December. Six traps each were set at 53 vineyards. Pests trapped for were the summer fruit tortrix, silver Y moth, European grape berry moth, European grape vine moth, Egyptian cottonworm and cotton cutworm. Pierce's Disease and Australian grapevine yellows were also surveyed for in August and September. Results from this survey were all negative. Phylloxera and Black Rot were most commonly found during our survey.

We always appreciate the live plant dealers and land owners who let us put traps on their property. This type of work is of great importance in protecting Kansas. Early detection will improve the odds of eradication and containment success if the pests are found.

*** New website: agriculture.ks.gov/divisions-programs/plant-protect-weed-control**

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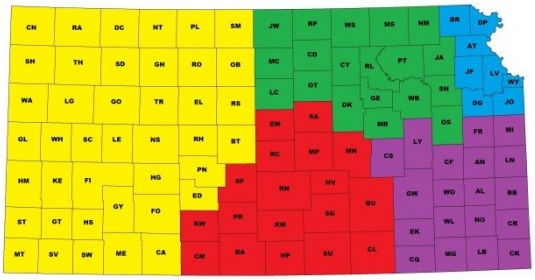

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