ENTOMOLOGICAL NEWS

KANSAS DEPARTMENT OF AGRICULTURE—PLANT PROTECTION AND WEED CONTROL

The **CAPS** program conducts science-based national and state surveys targeted at specific exotic plant pests, diseases, and weeds identified as threats to U.S. agriculture and/or the environment. These activities are accomplished primarily under USDA funding that is provided through cooperative agreements with state departments of agriculture, universities, and other entities. Surveys conducted through the CAPS Program represent a second line of defense against the entry of harmful plant pests and weeds.

Under the **Farm Bill**, APHIS provides funding to strengthen the nation's infrastructure for pest detection detection and surveillance, identification, and threat mitigation, while working to safeguard the nursery production system.

ALFALFA SURVEY

CAPS

This survey is planned for two years. Thirty-nine sites will be surveyed in counties where the most alfalfa is grown. One site for every 25,000 acres of alfalfa will be surveyed. The counties that that are planning to be surveyed are Barton, Dickinson, Finney, Ford, Gray, Haskell, Kearney, Marion, Ottawa, Pawnee, Reno, Rice and Stafford.

The pests surveyed for include: silver Y Moth, old world bollworm, Egyptian cottonworm and cotton cutworm. Although there are no records in the United States of establishment by The Silver Y moth (*Autographa gamma*), this and other *Autographa* species have been intercepted consistently at U.S. ports of entry on vegetables, cut flowers, ornamentals and other plants being imported. It is reported to feed on over 300 plants species.

The old world bollworm (*Helicoverpa armigera*) is not known to be established in North America, it is a native of Europe and Asia. This species is a general feeder and is highly resistant to pesticides. Hosts include a wide variety of fruits, vegetables, weeds, ornamental plants, and flowers.

EMERALD ASH BORER

Sixty-four purple prism traps and 7 green Lindgren funnel traps will be used. KDA will be trapping in 23 counties-Atchison, Barton, Bourbon, Butler, Cherokee, Crawford, Doniphan, Douglas, Graham, Harvey, Jefferson, Labette, Linn, Neosho, Pawnee, Reno, Rooks, Riley, Russell, Shawnee, Sheridan, Sherman, Trego counties.
USDA set 92 traps (85 purple prism traps and 7 green Lindgren funnel traps) in 23 counties. Thirteen girdled trap trees were set in Butler, Douglas, Jefferson, Reno and Sedgewick counties.

The Egyptian cottonworm (*Spodoptera littoralis*) is a native to Africa, and has been intercepted at U.S. ports but is not established in North America. It feeds on a wide variety of host plants.

The cotton cutworm (*S. litura) is also* polyphagous. Between the two species of *Spodoptera* the hosts range of plants cover over 40 families. *Spodoptera littoralis* feeds on at least 87 species of plants of ecomomic importance.

All target pests will be surveyed using bucket traps.

Bucket Trap

Alfalfa (*Medicago sativa*)

Pathway Survey

CAPS

Shipping hubs, such as container storage and transfer yards, inland ports, rail depots and rail yards, are pathways through which Exotic Plant Pests (EPP's) could be introduced and could also act as places at which EPP's could become established. The exteriors and interiors of shipping containers, as well as the cargo within, can be a pathway for introduction of EPP's. Areas where shipping containers are stored are often sites where solid-wood packing materials (SWPM) (including dunnage) are retained. Infested SWPM retained on site could be a source of EPPs. When containers, rail cars or trucks are unloaded, EPP's present in or on SWPM or cargo may escape into the surrounding environment. Shipping vehicles, such as containers and trucks, have also been shown to harbor EPP's. Shipping hubs are a logical pathway for potential introductions of EPP's and the focus of this survey.

This survey is planned for two years. Thirty sites will be surveyed at high-risk container yards for new exotic plant pest species that are potentially harmful to agriculture/horticulture. Survey sites will mainly be in the Kansas City area because this is Kansas' main shipping hub. The counties that are planning to be surveyed are Douglas, Franklin, Johnson, Shawnee and Wyandotte.

The lists of survey pests include but not limited to:

Insects:

Coleoptera:

Chrysomelidae: *Diabrotica speciosa*, Cucurbit beetle – Visual survey

Coleoptera: Curculionidae: *Naupactus leucoloma*, Whitefringed weevil – Pitfall trap

Pseudocneorhinus bifasciatus, Twobanded Japanese weevil — Pitfall trap

Coleoptera: Elateridae *Agriotes sputator*, European wireworm Pitfall trap

Agriotes ustulatus, European wireworm– Pitfall trap

Coleoptera: Scarabaeidae

Anomala orientalis, Oriental beetle- Pitfall trap

Rhizotrogus majalis, European chafer –Pitfall trap

Hymenoptera: Formicidae

Linepithema humile, Argentine ant– Protein bait Spam® trap

Solenopsis: *Solenopsis invicta*, Imported fire ant – Protein bait Spam® trap

Lepidoptera: Lymantriidae Lymantria: (2 traps per location with gypsy moth lure)

Lymantria *albescens*, Okinawa Gypsy Moth –Delta trap, 2 sticky sides, gypsy moth lure

L. dispar asiatica, Asian Gypsy Moth Delta trap, 2 sticky sides, gypsy moth lure

L. dispar japonica, Japanese Gypsy Moth –Delta trap, 2 sticky sides, gypsy moth lure

L. postalba, White-winged Gypsy Moth -Delta trap, 2 sticky sides, gypsy moth lure

L. umbrosa, Hokkaido Gypsy Moth –Delta trap, 2 sticky sides, gypsy moth lure

Plants: *Onopordum acaulon*, Horse Thistle Visual survey

Snails: Mollusca

Cernuella cisalpina, Striped

helicella snail) – Visual survey

Cernuella virgata, Striped snail – (*Cernuella* spp.) -Visual survey

Cochlicella, Helicid snail –

Cochlicella spp.) Visual survey

Monacha, Helicid snail –

(Monacha spp.) – Visual survey

Veronicella, Veronicellid Slug

(*Veronicella* sppVisual survey

ORCHARD SURVEY

FARM BILL

The survey will entail surveying 45 orchards producing apples. Possible counties to survey in: Brown, Butler, Chase, Dickinson, Doniphan, Douglas, Franklin, Geary, Harvey, Jackson, Jefferson, Johnson, Leavenworth, Lyon, Miami, Osage, Reno, Republic, Sedgwick, Shawnee, Sumner, Wabaunsee and Wyandotte counties. The pests associated with the survey include summer fruit tortix (*Adoxophyes orana*), cherry bark tortrix (*Enarmonia formosana*), old world bollworm (*Helicoverpa armigera*), brown marmorated stinkbug (Halyomorpha halys), Asiatic brown rot (*Monilinia polystroma*), apple brown rot (Monilinia fructigena) and apple proliferation (*Candidatus Phytoplasma mali*) is present.

Summer fruit tortrix is highly polyphagous and larvae have been recorded feeding on the leaves and fruits of plants in many different families.

Cherry bark tortrix is a pest that is damaging to ornamental cherries along the Pacific Coast. In Eurasia, it is considered a pest of minor importance. The first detection in North America was in 1990 in southern British Columbia; the moth was later found in the State of Washington in 1991 and has since spread to Oregon. The cherry bark tortrix prefers old wounds in mature trees, but it has infested younger plants in the United States. Its larvae can also attack damaged trunks, limbs, or pruning scars on branches.

The old world bollworm is not known to be established in North American, it is a native of Europe and Asia.T his species is a general feeder and is highly resistant to pesticides. Hosts include a wide variety of fruits, vegetables, weeds, ornamental plants, and flowers.

The brown marmorated stink bug is an invasive pest, which is becoming wide-spread in the U.S. and is of concern to farmers. It feeds on a large number of high-value crops and ornamental plants in its immature and adult life stages. The species is native to Asia

Enhanced Walnut Twig Beetle Survey

Jon Appel-State Plant Pathologist

Purpose: The work plan for walnut twig beetle (WTB) trapping is divided into two objectives. The first is monitoring of high risk areas of central and eastern Kansas where walnut is common and pathways are of concern. The second objective is a dedicated sentinel site trap program in western Kansas of known walnut locations. The second objective is motivated by the recent discovery of walnut twig beetle in Eads, Colorado which geographically lies about 40 miles directly west of the Colorado-Kansas border near Tribune, Kansas (58 miles) and within 80 miles from Kansas communities of Syracuse, Leoti, and Sharon Springs. Whitney Cranshaw of Colorado State University was quoted in a January 2015 article in the Denver Post that the infestation in Eads likely was brought in by natural passive spread of the beetle by wind currents or storms from the eastern range of Colorado (110 miles or more) or Rocky Ford, Colorado (70 miles). Therefore Kansas communities may be at risk from the Eads or other sites unknown in the same geographic region.

Central and Eastern Kansas: A monitoring trapping program for WTB will be conducted in each of the Plant Protection area staff areas except for western Kansas. A minimum of five sites will be monitored for a 60 day cycle dependent on staff work load for each area. High risk areas of introduction and establishment are considered to be urban areas and transportation hubs or junctions along east-west major Kansas highways and Interstate 70, staging or parking areas of tree arborist vehicles, compost or limb collection points, camps which attract out of state travelers, and wood working organizations and businesses that may import specialty walnut.

Western Kansas: A sentinel site program will be set up in 2015 and traps tended from May through October by the western Kansas Area Specialist, Bob Buhler and plant pathologist, Jon Appel. By September 1, a goal of 20 traps will be monitored, but this will be dependant on locations found. The

traps will be located in counties in the two tiers (columns) near the Colorado border from Cheyenne and Rawlins in the north to Morton and Stevens in the south. Past surveyed locations by Kansas Forest Service (KFS) and KDA will be used primarily for the sentinel site program while new locations may also be considered.

Outcomes:

1. **Western Kansas**: WTB population assessment should give us a better understanding of the status of WTB at a high risk region of the state.
2. **Western Kansas**: The survey will provide potential walnut tree locations to better assess the potential of future quarantine options, depopulation of hosts or a ban on future plantings of host walnuts.
3. **Central and eastern Kansas**: The monitoring program will provide additional information to an already present sizable walnut location database.
4. **Central and eastern Kansas**: In the absence of outside funding, an annual continuance of monitoring with alternating year to year sights will provide a functional early detection program (although not ideal), pathway information, and support data for both interstate and international walnut sales.

Thousand Cankers Disease

(*Geosmithia morbida)*

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