



## **INTRODUCTION:**

Threats to U.S. agriculture are often thought of as invasive pests and diseases that are introduced by imported cargo. However, conveyances such as commercial shipments or passenger vehicles are pathways for invasive pests and diseases as well.

This presentation will show the viewer how several types of contaminants might be spread by conveyances. It will also show the reasons for U.S. Customs and Border Protection's efforts to prevent invasive species from entering the United States, and ways for industry to prevent conveyance contamination.

By engaging trade groups and providing methods and techniques that will reduce contaminants in conveyances, U.S. Customs and Border Protection aims to effect fewer delays, re-exportations, and treatments.

Any inquiries regarding this information should be directed to CBP, Office of Field Operations, Agriculture Programs and Trade Liaison, or to a local CBP office staffed with an Agriculture Specialist.

Let's get started.

## Overview

- What is carrier conveyance contamination?
- Why are contaminants a concern?
- Examples of carrier conveyance contamination.
- CBP efforts to prevent carrier conveyance contamination.
- Ways for preventing carrier conveyance contamination.



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### **OVERVIEW:**

During this presentation, we will discuss:

- What is carrier conveyance contamination?
- Why are contaminants a concern?
- Examples of carrier conveyance contamination.
- CBP efforts to prevent carrier conveyance contamination.
- Ways for preventing carrier conveyance contamination.



## What is Carrier Conveyance Contamination?



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### OVERVIEW:

- Carrier conveyances, such as ocean containers, aircraft, rail cars, and commercial trucks, are pathways by which invasive plant and animal pests and diseases might be introduced into the United States.
- The economic and environmental impact of such unintentional introductions can be significant.
- Invasive species are expensive to control and can reduce agricultural production, property values, and water availability.
- There are approximately 1,050 invasive plant species reported in the United States.

### Photos

**Left:** Soil contamination on military vehicle.

**Right:** Animal blood leaking from a reefer arriving from foreign. (Seattle FO, 10/24/2013)

## Contaminants Defined

- Contaminants are unwanted substance(s) or foreign material in a physical body or in the environment that can cause serious harm to United States agriculture and natural resources.



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### OVERVIEW:

- Contaminants are substance(s) in a physical body or in the environment.
- Biologists consider accidental introduction of contamination a threat to United States agriculture and natural resources.
- For CBP agriculture specialists, these contaminants are viewed as agriculture and environmental threats, just as terrorists are security threats.
- Contamination is found in all pathways: sea, air, land and rail. Conveyance contamination is found on regulated agricultural commodities and general cargo of all types, not just perishable agricultural commodities.

## Why are contaminants a concern?



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### OVERVIEW:

- In today's global economy, the volume of international trade increases the potential for invasive ("non-native") species to enter the United States.
- Past introductions of non-native pests and diseases have seriously harmed urban and rural landscapes. The cumulative costs in lost revenue and cleanup have reached into the billions of dollars.
- Each year, invasive species impact the U.S. economy by more than \$1 billion annually in the United States.
  - This cost doesn't include the damage invasive species cause to hundreds of millions of acres of native ecosystems, native plants, and animals.
- Both photos show damage to trees caused by the emerald ash borer, a destructive wood-boring beetle of ash trees that is native to China and eastern Asia.
  - **This insect is believed to have been introduced into the United States in contaminated Wood Packaging Material (WPM) carried in cargo ships or airplanes originating in its native Asia.**
  - First detected in the United States in 2002, emerald ash borer infestations are found in 22 states.
  - The emerald ash borer females deposit eggs on ash bark on the surface, crevices and cracks, or just under the outer bark of ash trees.
  - After hatching, the larvae immediately begin chewing through the outer bark to the tissue layer that spreads nutrients throughout the tree.
  - Larvae feed in S-shaped tunnels, called galleries, in the phloem. As the larvae feed and grow, the galleries get larger. The galleries disrupt the transport of nutrients within the tree.
    - The tunneling larva not only kill the trees, but reduce and weaken the value of the wood.

- The larva emerge from the WPM as adults and attack trees in the immediate area.
- Taking pallets and wood into the forest for camping expeditions, and moving wood around the U.S., increases the habitat for the destructive pest.
- Tens of millions of ash trees have been cut down due to the emerald ash borer.
- The costs of the emerald ash borer for municipalities, property owners, nursery operators and forest products industries is in the tens of millions of dollars.

**Photos**

**Left:** Daniel Herms, The Ohio State University, Bugwood.org - See more at:  
<http://www.invasive.org/browse/detail.cfm?imgnum=1523078#sthash.NhyccoFV.dpuf>

**Right:** Daniel Herms, The Ohio State University, Bugwood.org - See more at:  
<http://www.invasive.org/browse/detail.cfm?imgnum=1523071#sthash.5zPQ4cpC.dpuf>

## Why are contaminants a concern?



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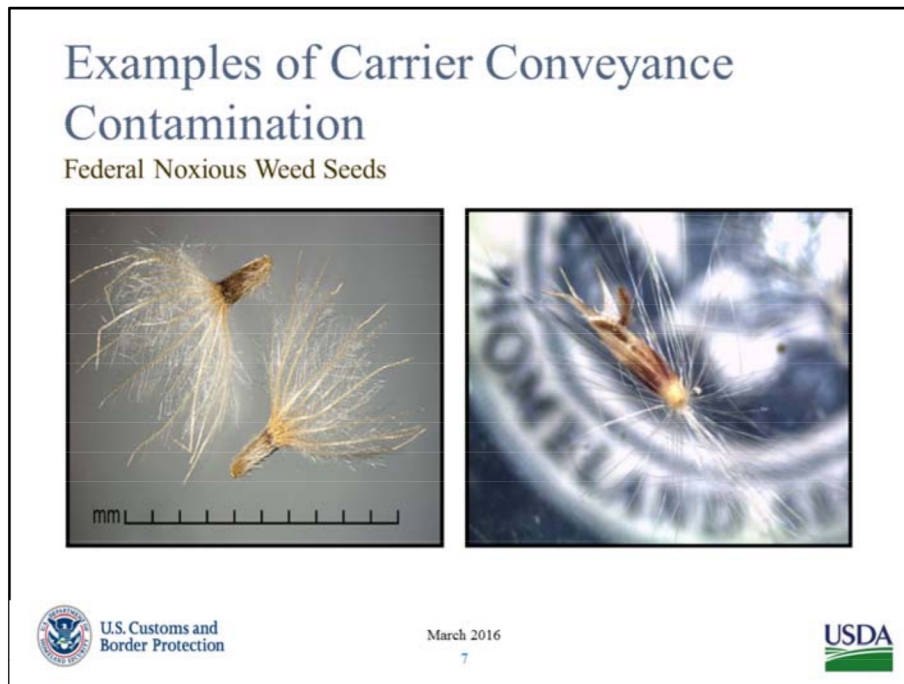
### OVERVIEW:

- Invasive species not only damage plants, but can also spread foreign animal diseases.
- **Foot-and-mouth disease** is highly contagious and caused by a very stable virus.
  - Only a few viral particles carried through manure stuck to farm boots and equipment can spread the disease. An animal can become infected after contact with as few as 10 virus particles.
  - It can be carried airborne for 170 miles through the air.
  - The virus can also survive in the soil for more than a month.
  - The 2001 outbreak of Foot-and-Mouth disease in the United Kingdom is estimated to have caused about \$5 billion in losses to food and agriculture. Up to 10 million sheep, pigs, and cows were slaughtered, and for several months, the nation was banned from exporting livestock and animal products that could potentially transmit the virus.
- Highly potent strains of the **Newcastle disease** virus are fatal for birds.
  - The virus is readily transmitted on fomites (substances capable of carrying infectious organisms), such as shoes and equipment used by vaccination and personnel who work closely with and around the infected birds. Example of personnel: Crews that carry out debeaking which is the process of trimming the beak of a bird.
  - The 2002-03 outbreak in Southern California spread to poultry operations in California and backyard poultry in Arizona, Nevada and Texas.
  - Trade restrictions resulting from the disease harmed California and U.S. poultry and egg producers.
  - As a result of the outbreak, 3.16 million birds were depopulated at a cost of \$161 million.

**Photos**

**Left:** Photo of cattle being incinerated in response to FMD outbreak. Photo from article published by Lawrence Livermore National Laboratory: “Protecting Our Nation’s Livestock”, dated May 10, 2006. Accessed on <https://www.llnl.gov/str/May06/Lenhoff.html> on 04/11/2014.

**Right:** Photo of humanely euthanized chickens being disposed during ND outbreak in Southern California. Photo from CDFA website, [http://www.cdfa.ca.gov/ahfss/Animal\\_Health/avian\\_health/av\\_health\\_tutorial\\_by\\_4.htm](http://www.cdfa.ca.gov/ahfss/Animal_Health/avian_health/av_health_tutorial_by_4.htm), accessed on 04/11/2014.



### OVERVIEW:

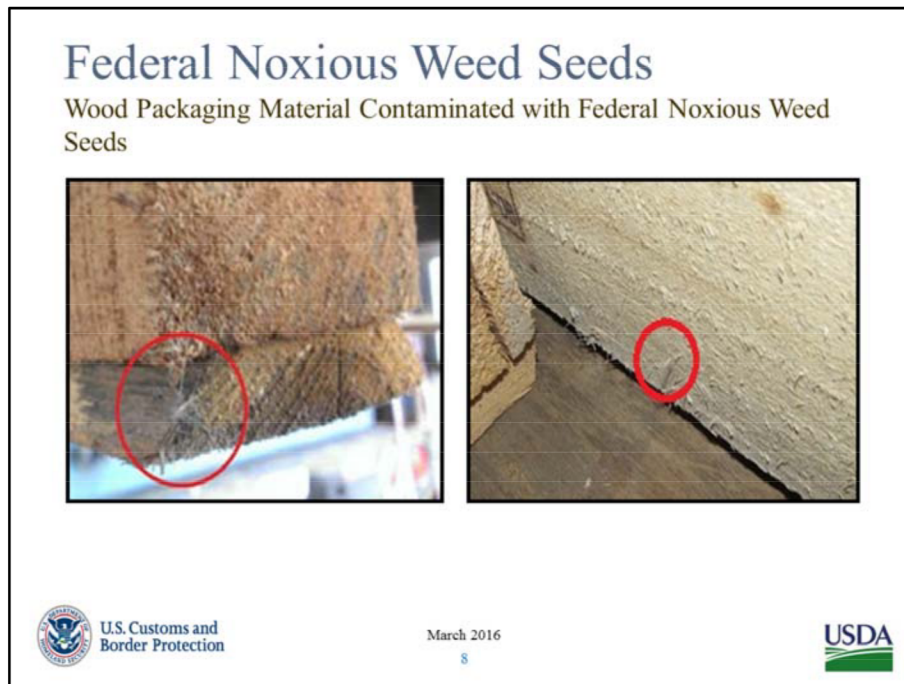
- A federal noxious weed is an invasive plant species introduced into a non-native ecosystem and in consequence are likely to cause harm.
- Impacts of invasive weed introduction:
  - Invasive weeds are a leading cause of crop loss, causing billions of dollars each year.
  - They decrease biodiversity within an ecosystem; invasive species are the second leading cause of animal population decline and extinction worldwide.
  - They displace native plants that wildlife and fish depend on for food.
  - They increase soil erosion and can cause major damage to streams and other wetland areas that provide habitat for native fish, plants, and animals.
  - They increase the frequency and risk of wildfires
  - They reduce agricultural production and property values.
- There are an estimated 2,000 invasive and noxious weeds established in the United States.
- In the United States, it's estimated that invasive weeds occur on more than 17 million acres, with similar infestations occurring in Canada and Mexico.

### Photos

**Left:** *Tridax procumbens* Linnaeus found in an ocean container of tubing that arrived by rail.  
(Seattle FO, 09/30/2013)

**Right:** *Saccharum spontaneum* Linnaeus (Poaceae). (Detroit FO)





### OVERVIEW:

Information on cogongrass from

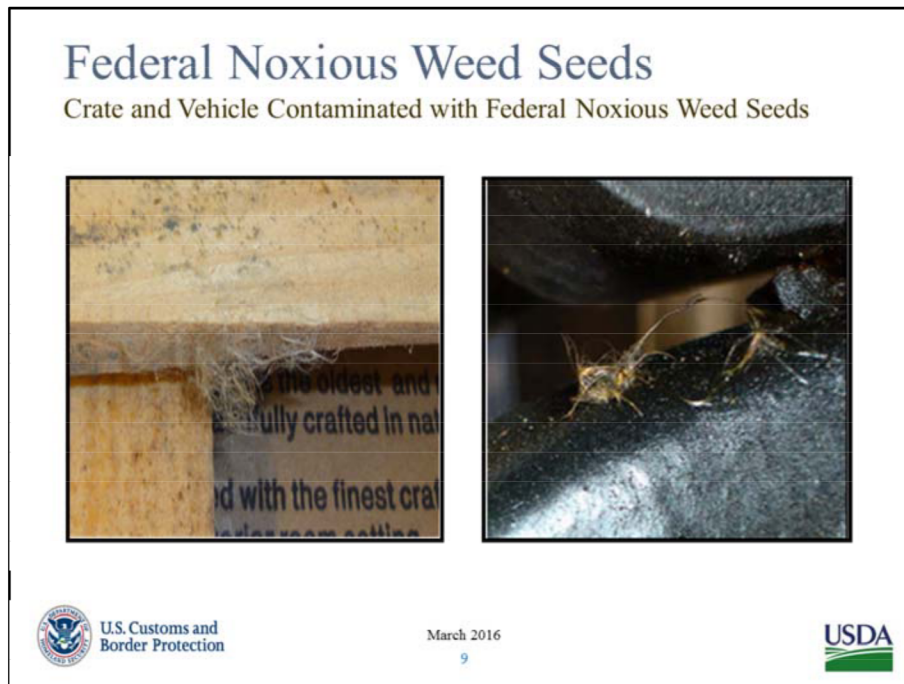
<http://www.invasivespeciesinfo.gov/plants/cogongrass.shtml>:

- Cogongrass first arrived accidentally in Louisiana in 1912 (Bryson and Carter 1993).
- In packing material used for imported goods (Tabor 1949).
- It forms dense stands that crowd out native species (Lippincott 1997).

### Photos

**Left:** *Imperata cylindrica* found on wood packaging material (WPM) in an ocean container of ceramic pottery. (SFO, 08/17/2013)

**Right:** *Imperata cylindrica* found on WPM in an ocean container of ceramic tiles. (Baltimore FO, 12/06/2013)



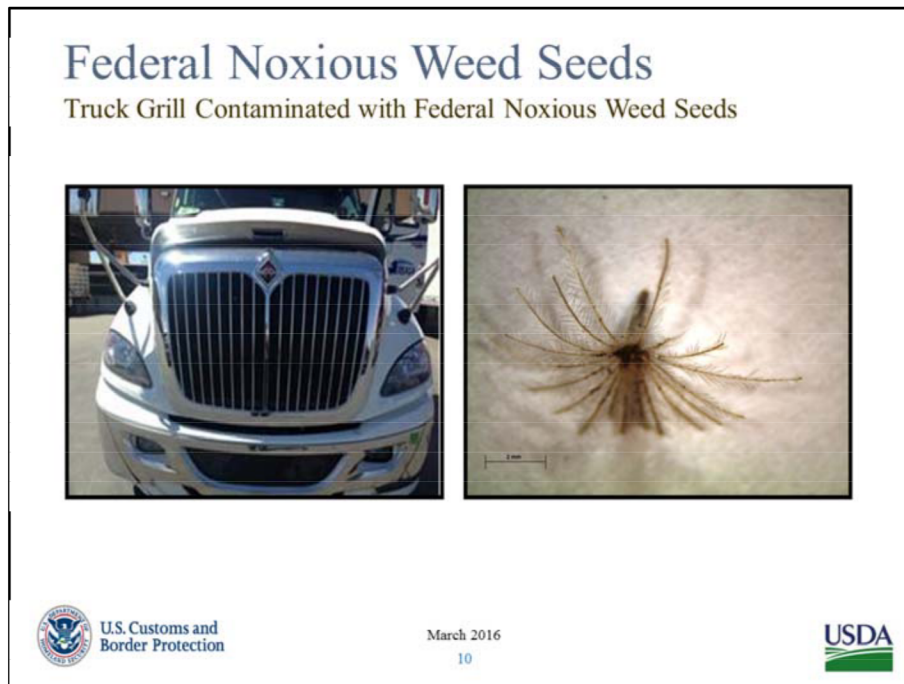
### OVERVIEW:

- *Saccharum spontaneum*, or wild sugarcane, is native to India, and is now distributed widely in tropical and subtropical regions of Asia.
- Wild sugarcane is not established in the United States, but has been introduced to Hawaii and Puerto Rico.
- Wild sugarcane can establish rapidly because it produces copious amounts of seeds dispersed by wind and lay dormant waiting for proper conditions for germination.
- Wild sugarcane affects cotton, pearl millet, sorghum, sugarcane, rice, forage crops, and plantation crops such as tea and coffee. An infestation can cause a loss in crops and unusable land for agriculture.
- During FY13, introduction into the U.S. primarily occurred via maritime shipments, and on non-agricultural commodities such as wood packaging material and carriers.

### Photos

**Left:** *Imperata cylindrica* (Linnaeus) found on crates of slate imported via rail. (Seattle FO, 07/01/2013)

**Right:** *Saccharum spontaneum* Linnaeus found on the undercarriage of military vehicle. (SFO. 09/11/2013)



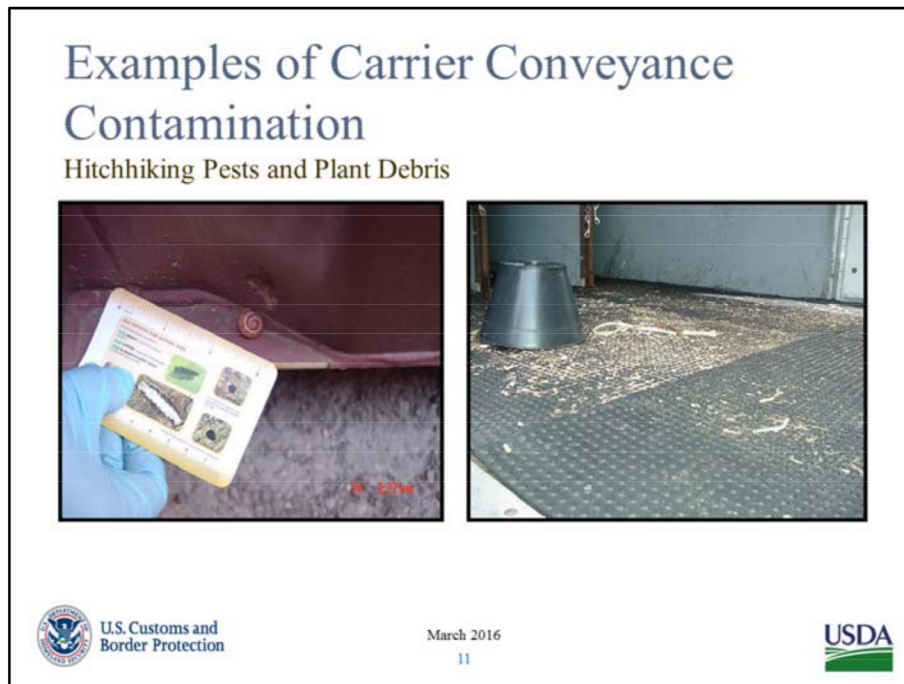
## OVERVIEW:

- *Tridax procumbens*, or coat buttons, is native to the tropical Americas, but has been introduced to tropical, subtropical, and mild temperate regions worldwide.
- It occurs throughout Mexico, the West Indies, Guatemala to South America, and India.
- Coat buttons has been found in Hawaii, Florida, Puerto Rico Texas, and the U.S. Virgin Islands.
- Producing large numbers of dry, single seed fruits known as achenes (500-1500 per plant), distribution via wind can be extensive.
- Coat buttons compete with and reduce crops and pastures affecting cotton, corn, sugarcane, sorghum, soybeans, and wheat. In addition, it can also harbor several crop pests, such as nematodes, red spider mites, and insects.
- Introduction into the U.S. primarily occurs via land border pathways on non-agricultural commodities such as wood packaging material and carriers.

### Photos

**Left:** Grill of commercial truck entering a land border port of entry. (Tucson FO, 04/02/2014)

**Right:** *Tridax procumbens* Linnaeus found on the grill of a truck. (Tucson FO, 04/02/2014)



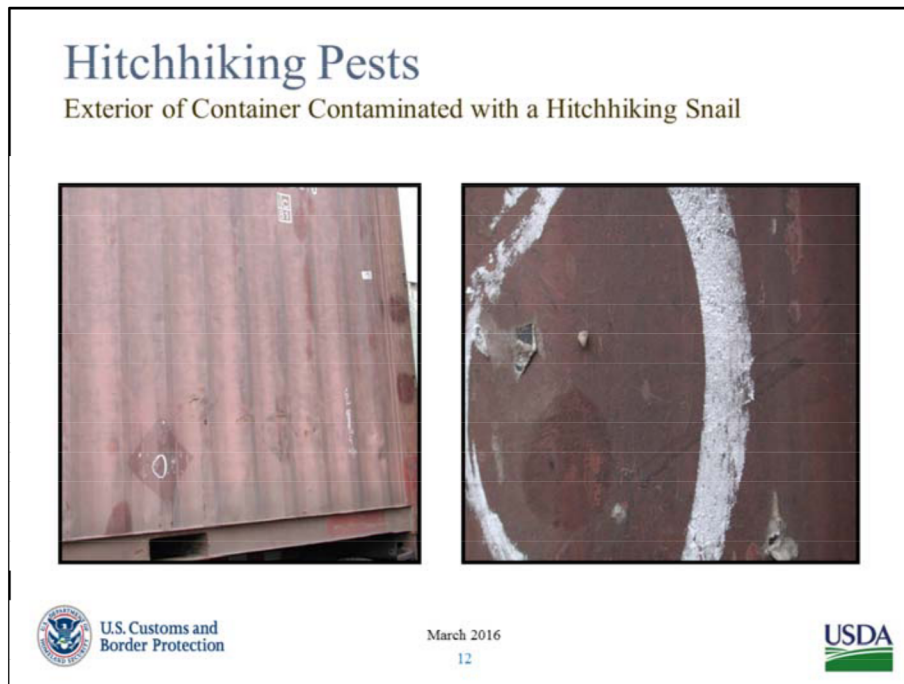
### OVERVIEW:

- Hitchhiking pests can be found on commodities that they are not generally known to feed on.
- Similarly, hitchhiking pests may be found on conveyances where no known hosts exist.
- Pests may simply “hitch” a ride on the conveyance because the conveyance may have been near or on a host.
- Plant debris might contaminate a conveyance as residual matter from previous shipments.
- Hitchhiking pests and plant debris pose agricultural risks because they are pathways for invasive species.

### Photos

**Left:** Photo of snail on the exterior of a container. (Chicago FO)

**Right:** Photo of hay contamination on floor of a container. (From APTL photo archive.)



## OVERVIEW:

Information obtained from USDA APHIS PPQ's NPRG: Temperate Terrestrial Gastropods

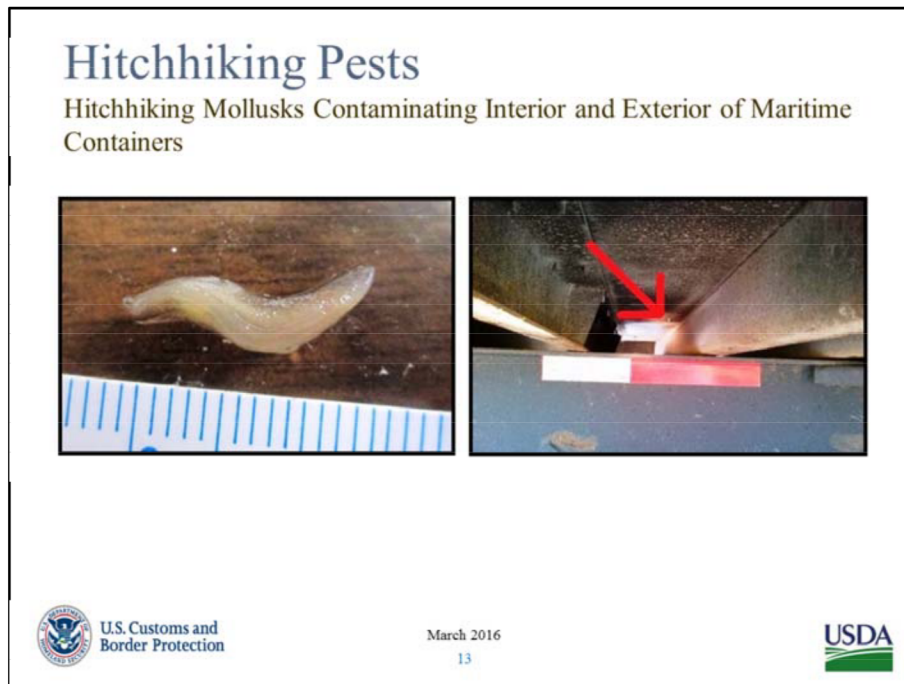
- Temperate terrestrial gastropods, such as snails and slugs can:
  - Cause damage by feeding on agricultural and horticultural crops as well as native plants, reducing crops and crop quality;
  - Transmit pathogens to humans indirectly when humans consume vegetables and fruits contaminated by snails and slugs;
  - Transmit pathogens of both plants and livestock in their feces; and
  - Displace native species of snails and slugs.
- Additionally, snails can disrupt agricultural operations when they gather together in a behavior known as massing.
- Helicid, hygromiid and cochlicellid snails are known for climbing on vegetation, fence posts, and other upright objects, in response to temperature extremes.
- They climb on upright objects in extreme temperatures. Carriers that remain in and around vegetation provide opportunities for snail and slug contamination.

### Photos

**Left:** Far view of a container with a snail. (From APTL photo archive.)

**Right:** Close-up view of the snail on the same container. (From APTL photo archive.)





### OVERVIEW:

Information obtained from USDA APHIS PPQ's NPRG: Temperate Terrestrial Gastropods

- Members of the family Hygromiidae are pests of fodder crops and are considered serious pests in Europe.
- For example, white snails - at times intercepted by CBP - are considered by many agricultural authorities as among the more serious molluscan pests.
  - In southern Australia, the species have produced populations so great as to interfere with grain production. The snails climb on to the heads and stalks of the crops close to harvest, which clogs harvesting machinery and contaminates the grain.
  - White snails are also pests on seedling crops such as wheat, barley, oil seeds, seed carrots, and legume-based pastures (e.g. annual medics, lucerne, clovers, peas, beans) causing severe damage and occasionally total destruction.
  - Ornamental crops are also affected.
  - Livestock will refuse to feed on pasture and hay that are heavily contaminated by the slime trails (Baker, 1986; 1996; 2002).

### Photos

**Left:** A slug in the interior of the container near the base of a pallet of ceramic tile.  
(Baltimore FO, 03/19/2014)

**Right:** A snail on the undercarriage of a container of steel coils. (Baltimore FO, 04/25/2014)





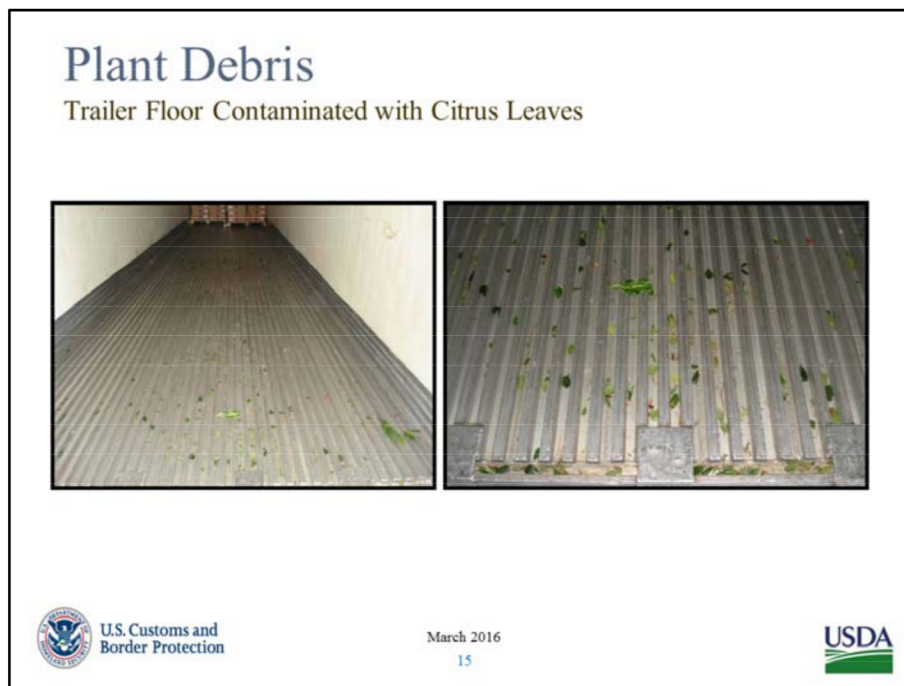
## OVERVIEW:

Information from USDA APHIS PPQ Release No. 0309.10, dated June 7, 2010.

- Beekeeping is an essential component of modern U.S. agriculture, providing pollination services, adding \$15 billion in value to more than 90 commercial crops.
- Since the 1980s, however, a number of factors have led to the declining health of U.S. honey bee colonies.
- For example, several honey bee pests, such as the small hive beetle, Varroa mite, tracheal mite, and single-celled gut parasite *Nosema ceranae* (bee parasites) can damage honey comb, stored honey and pollen.
- Honey bees also face newly introduced diseases caused by viruses, bacteria and fungi.
- A swarm of bees hitchhiking on an aircraft or a vessel is one way for these parasites to reach local honey bee colonies.

### Photo

Swarm of bees on exterior of aircraft. (From APTL photo archive.)



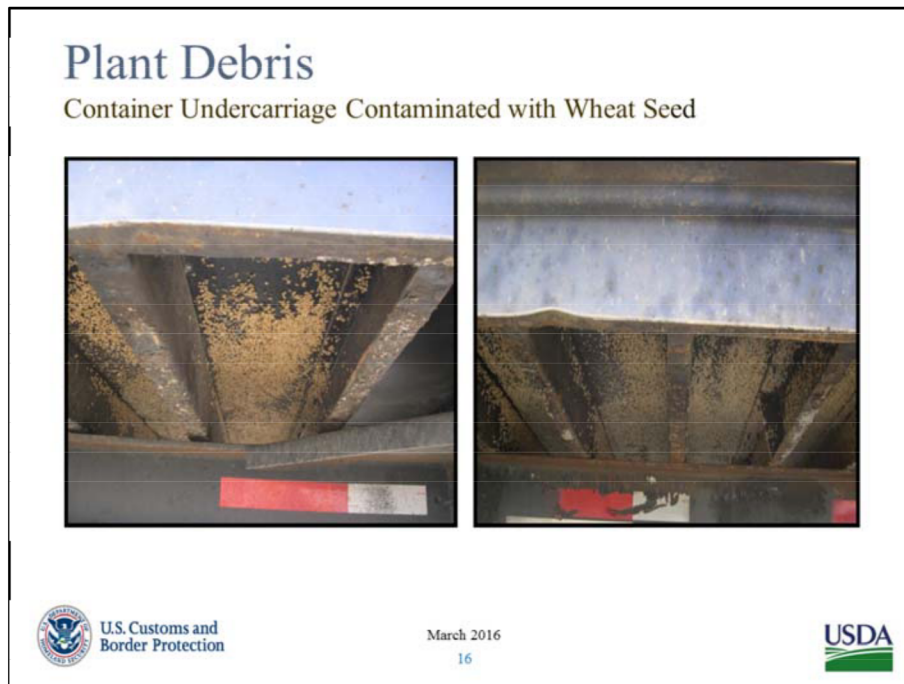
## OVERVIEW:

- Plant debris on the floor of a container might harbor plant pests.
- In this situation, citrus leaf contamination was discovered on the floor of a container being used to transport cut roses from Mexico.
- Citrus leaf contamination is still a pathway for pests and plant diseases.
- The Asian citrus psyllid exists in Mexico, and is found on citrus leaves.
- The Asian citrus psyllid may carry bacteria that cause a devastating disease known as “huanglongbing.”
  - When citrus trees are infected with huanglongbing, there is no cure.
  - The psyllids are capable of transmitting the bacteria to multiple trees, causing the loss of an entire orchard.
- Although no psyllids were found in this situation, the citrus leaf contamination was still a pathway by which the psyllids might have “hitchhiked” into the United States.

## Photos

**Left:** View of container floor with cargo and citrus leaf contamination; from a land border cargo inspection. (San Diego FO, 11/15/2010)

**Right:** Closer view of citrus leaf contamination. (San Diego FO, 11/15/2010)



## OVERVIEW:

Information obtained from USDA APHIS PPQ website and Karnal Bunt Program Manual:

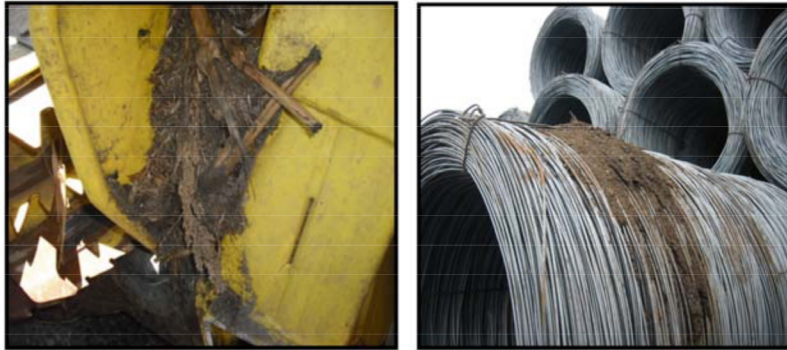
- Karnal bunt, caused by the fungus *Tilletia indica* Mitra, is a wheat disease.
- Karnal bunt is thought to have been accidentally introduced into the United States, decades ago, on contaminated seed.
- Karnal bunt presents an export problem because it's considered by some U.S. trading partners to be a quarantine pest; the U.S. considers it a quality pest that seldom results in significant yield losses.
- Many U.S. trading partners will not accept U.S. wheat unless it's certified to be from areas of the U.S. where Karnal bunt is not known to occur.
- Contaminated seeds are the major source of spread.

### Photos

Wheat seed contamination on the undercarriage of a container. (From APTL Policy image library.)

# Examples of Carrier Conveyance Contamination

## Soil Contamination



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### OVERVIEW:

- APHIS regulations protect the health and value of American agriculture and natural resources from the introduction of destructive plant and animal diseases and pests.
- Soil is **always** prohibited as a contaminant.

### Photos

**Left:** Soil contamination on used forage harvester imported from Argentina. (LAFO 7/24/2013)

**Right:** Soil contamination on steel coils. (From APTL photo archive.)



### OVERVIEW:

- Contamination from soil can be an unintentional pathway for:
  - Animal and plant viruses
  - Bacteria
  - Fungi
  - Nematodes
  - Noxious weed seeds
  - Various life stages of destructive insects
  - And other contaminants, like plant debris (pictured on the right).

### Photos

**Left:** Soil in a container. (APTL photo archive.)

**Right:** Soil contamination on a container floor. (El Paso FO, 04/14/2014)

## Soil Contamination

Military Vehicle and Farm Equipment Contaminated with Soil



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### OVERVIEW:

- As mentioned in an earlier slide, foot-and-mouth disease is a highly contagious disease caused by a very stable virus.
- An animal can become infected after contact with as few as 10 virus particles.
- The virus can survive in the soil for more than a month.
- Thus, soil contamination on farm equipment from a country with foot-and-mouth disease is a viable pathway for the introduction of the virus to a farm where the virus does not exist.

### Photos

**Left:** Soil contamination on military vehicles. (Houston FO)

**Right:** Soil contamination on farm equipment. (El Paso FO, 07/26/2011)



## Examples of Carrier Conveyance Contamination

Fomites for Foreign Animal Disease



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### OVERVIEW:

Conveyances contaminated with animal feed such as hay, or by-products of livestock such as manure, blood, or urine, risk introducing foreign animal diseases into the United States.

Information obtained from presentation developed by the Center for Food Security and Public Health at Iowa State University College of Veterinary Medicine, through funding from the US Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services:

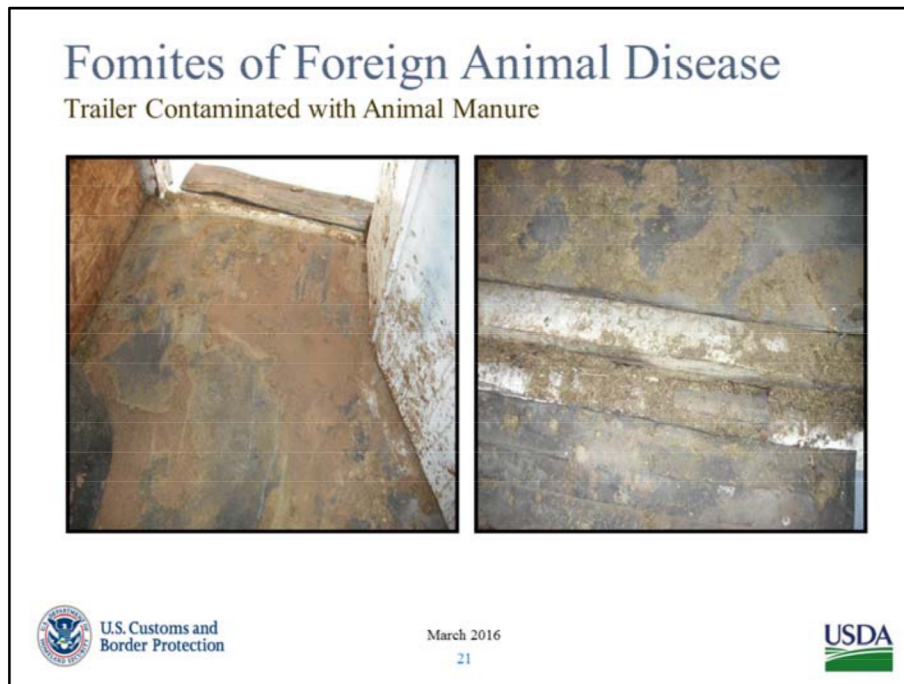
- Fomites are inanimate objects capable of transferring disease agents through either direct contact or oral transmission.
- Fomites can include: boots, clothing, vehicles, shovels, tools, bowls or buckets, tack, etc.
- Vehicles and trailers with contaminated tires, wheel wells, and undercarriages can serve as fomites.
- Humans with contaminated clothing, shoes, or boots are also considered fomites with the potential for moving disease agents within the facility or from one facility to another.
- Examples of diseases spread by fomites include African swine fever, classical swine fever, foot-and-mouth disease, or influenza.

**Photos**

**Left:** Animal manure contamination on a maritime vessel. (Baltimore FO)

**Right:** Blood contamination on the floor of a container. (San Diego FO, 10/19/2012)





Other animal diseases of concern include:

- Virulent Newcastle disease
- Bovine spongiform encephalopathy

Information developed by staff veterinarians at the CFSPH and approved by APHIS for use as training materials for the USDA APHIS National Veterinary Accreditation Program:

- Infected birds shed Newcastle disease virus in feces and respiratory secretions.
- As mentioned in a previous slide, the virus is transmitted readily on fomites, such as shoes and equipment used by vaccination and debeaking crews.

Information from OIE:

- Bovine spongiform encephalopathy (BSE) is a disease in cattle caused by feeding rendered material from infected cattle or sheep back to other cattle.
- An effective strategy for preventing the introduction or dealing with occurrences of BSE includes: removal of specified risk material (e.g. brain, spinal column) during slaughter and processing of carcasses; and prohibiting the inclusion of specified risk material in animal feeds, thus removing contaminated material from the food chain.

**Photos**

Animal manure contamination on empty horse trailer. (El Paso FO, 06/30/2011)

## Fomites of Foreign Animal Disease

### Military Vehicle Contaminated with Bird's Nest



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- Vehicles are a pathway for more than soil contamination and plant debris.
- A bird nest was found on a military vehicle shipped to the United States from Afghanistan.
- Afghanistan is recognized by the U.S. Department of Agriculture as being affected with Newcastle disease and highly pathogenic avian influenza (HPAI).

Information obtained from OIE on (HPAI):

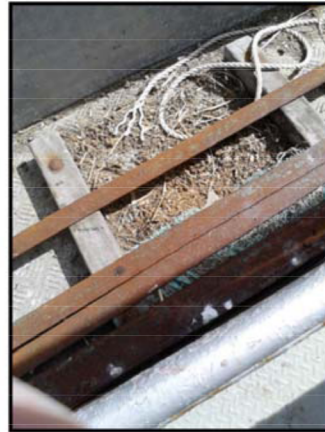
- A few poultry deaths may occur over several days with a highly pathogenic strain of HPAI (including H5N1 strain), followed by rapid spread and a mortality rate that can then approach 100% within 48 hours.
- Avian influenza viruses are spread through direct contact with secretions from infected birds, feces, contaminated feed, water, equipment and clothing.
- Avian influenza viruses are also readily transmitted from farm to farm by the movement of domestic live birds, people (especially when shoes and other clothing are contaminated), and contaminated vehicles, equipment, feed, and cages.
- Highly pathogenic viruses can survive for long periods in the environment, especially when temperatures are low. For example, at a much higher temperature (37°C), H5N1 viruses have been shown to survive in fecal samples for six days.

**Photos**

Bird nest found on a military vehicle. (Houston FO, 02/24/2014)

## Fomites of Foreign Animal Disease

Vessel Contaminated with Animal Manure, Used Straw, and Feed



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### OVERVIEW:

- Cleaning conveyances after cargo has been offloaded, and before more cargo is laded, ensures that contaminated fomites are not disseminated into the environment.

### Photos

Animal manure, used straw and feed on the top deck on cattle loading ramps and other stored equipment. (Baltimore FO, 05/12/2014)



## OVERVIEW:

Information obtained from Asian Gypsy Moth (AGM) training resources:

- AGM females lay egg masses that yield hundreds of caterpillars that can defoliate over 500 species of trees and shrubs.
- Egg masses are yellowish or whitish fuzz and average about 1 ½ inches long and ¾ inch wide, but can be as small as a dime.
- Spread and establishment of AGM is enhanced by the AGM female ability to fly up to 25 miles, a large host range, adaptation to colder climates, and the ability of egg masses to tolerate extreme temperatures and moisture.
- AGM egg masses are also found on the exterior of shipping containers, and on bulk or loose cargo, such as steel pipes.

### Photos

**Left:** AGM egg masses on vessel moorings. (LAFO)

**Right:** AGM egg masses on vessel superstructure.



### OVERVIEW:

- Aside from the unintentional introduction of pests via contaminants and as hitchhikers, some commodities are shipped with wood packaging material that is infested with wood-boring pests.
- As mentioned in a previous slide, emerald ash borer was believed to have been unintentionally brought into the U.S. by ash wood that was used to stabilize crates during shipping in the 1990's.
- Introduction of the emerald ash borer has resulted in the following:
  - Death of tens of millions of ash trees in the northeast.
  - Cost to municipalities, property owners, nursery operators, and forest products industries has totaled in the tens of millions of dollars.
- Wood-boring insects cause more than \$3.5 billion annually in losses.
- Of all invasive insect species detected from 1980-2006, 56% were wood-borers.

### Photo

CBPAS intercepting a wood-boring pest in a wooden pallet. (Laredo FO)



## CBP Inspection and Safeguarding Efforts

CBP Inspection for Federal Noxious Weed Seeds



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### OVERVIEW:

- CBP personnel are trained to recognize all types of contaminants through inspection of conveyances and the cargo being transported.
- Sometimes, novel inspection methods are developed and utilized to ensure thorough inspection.

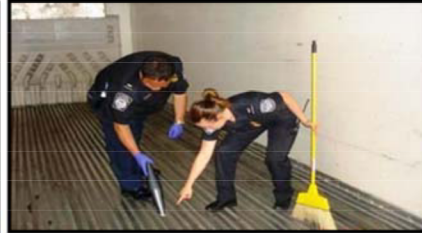
### Photos

CBP agriculture specialists utilize a yard stick with tape attached at the end to inspect for noxious weeds seeds. (Detroit FO)



## CBP Inspection and Safeguarding Efforts

CBP Inspecting the Inside of Containers for Contaminants



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### OVERVIEW:

- At times, the inspection of conveyances for contamination requires creative use of ordinary tools, like a vacuum.
- Grooved container floors may shelter hitchhiking insects and noxious weed seeds. A vacuum allows for the removal of insects and weed seeds while minimizing possible dissemination.


### Photos

**Left:** CBPAS sweeping container floor to inspect for and prevent the entry of contaminants. (Detroit FO, 08/18/2011)

**Right:** CBPAS vacuuming and sweeping container floors to inspect for and prevent the entry of contaminants. (San Diego FO, 07/18/2013)

## CBP Inspection and Safeguarding Efforts

CBP Inspecting the Outside of Containers and Cargo for Contaminants



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### OVERVIEW:

- Like AGM, snails may attach to containers and bulk or loose cargo.
- CBP personnel inspect the exterior of containers for hitchhiking pests- not just the interior.
- If hitchhiking snails are found, salt barriers are used to prevent the movement of the snails.

### Photos

**Left:** CBPAS pointing at a snail on the exterior of a shipping container. (San Francisco FO)

**Right:** Salt barrier surrounding a container found to be contaminated with snails. (Seattle FO)

## CBP Inspection and Safeguarding Efforts

CBP Inspecting Vessels for Contaminants



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### OVERVIEW:

- CBP personnel inspect vessels for AGM egg masses.
- Hand mirrors are used to inspect in certain areas, such as behind light fixtures, where the moths may be attracted and seek shelter from the elements.

### Photos

CBP agriculture specialists conducting AGM vessel inspections.

## CBP Inspection and Safeguarding Efforts

CBP Inspecting WPM for Contaminants



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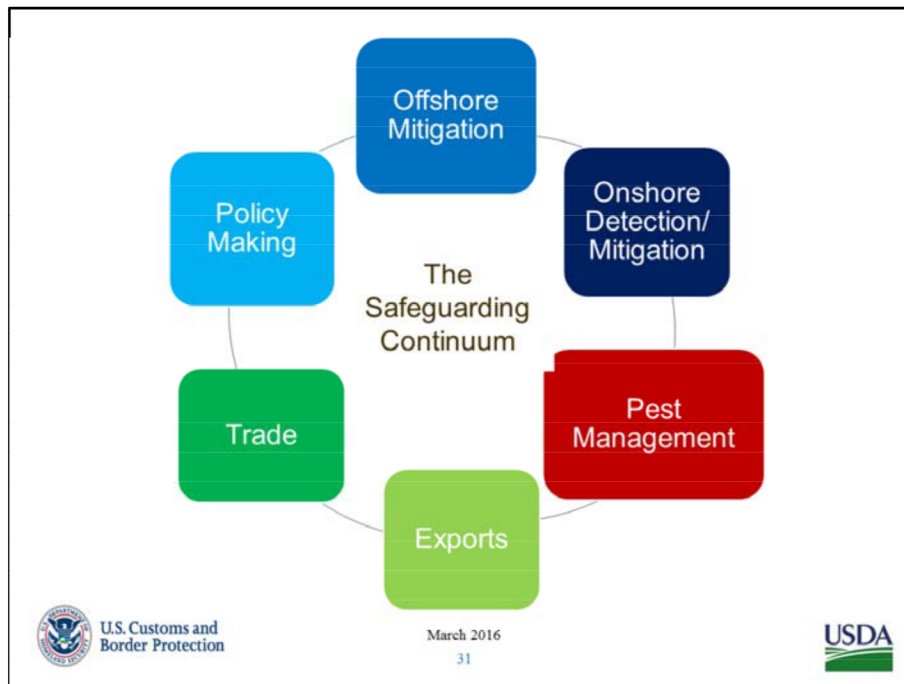
### OVERVIEW:

- CBP personnel inspect wood packaging material for contaminants, such as pests, and compliance with the wood packaging material regulation (7CFR319.40).
- Flashlights are a useful tool when examining a wood pallet for federal noxious weed seeds.
- If CBP personnel find bark, and/or indications of insect presence, a wood pallet may be broken down for further inspection.

### Photos

**Left:** CBP agriculture specialist inspects a wood pallet for federal noxious weed seeds. (Detroit FO)

**Right:** CBP agriculture specialist peels the bark from a wood pallet to inspect for bark beetles. (Laredo FO)



## OVERVIEW:

- Protecting U.S. agricultural resources against the introduction of invasive pests and diseases is a recurrent process that involves the cooperation and diligence of multiple entities.
- This is a responsibility shared by CBP and our partners in the U.S. Department of Agriculture and the trade community.
- CBP also partners with the trade community to make international trade more efficient, cost-effective and secure.

## Impact to Trade Resulting from Contamination: All Types

- Carrier conveyances found with contaminants will remain on hold.
- If the contaminants require action to mitigate the risk of introduction, an Emergency Action Notification (EAN) will be issued.
- The EAN specifies the type of action required treatment, re-exportation, destruction or other remedial measure, such as steam cleaning.



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### OVERVIEW:

- There is a very real impact to trade when conveyances are found contaminated.
  - delays for cargo release
  - demurrage charges due to cargo holds
  - expense of having your container quarantined, tarped, and treated or cleaned
- This initiative aims to increase outreach to trade entities, teach methods and techniques that will minimize contaminants in conveyances, and ultimately result in less holds, delays, and commodity re-exportations or treatments.

## Impact to Trade Resulting from Contamination: WPM

- WPM found infested with wood-boring pests will remain on hold.
- If United States Department of Agriculture determines that action is required to mitigate the risk of introduction, an EAN will be issued.
- The EAN will specify that the shipment must be re-exported, as per 7CFR319.40.



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### OVERVIEW:

Impact to trade when conveyances are contaminated - WPM.

- delays for cargo release
- demurrage charges due to cargo holds
- expense of having your container quarantined and re-exported

## Best Practices for Industry

To ensure carrier conveyances are free of Federal Noxious Weed seed and soil contaminants:

- Visually inspect the exterior and interior of conveyances for contamination prior to arrival in the United States.
- Sweep, vacuum, or wash conveyances prior to loading and be cognizant that environmental factors, such as heavy rains, may increase the likelihood of soil contamination.



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### OVERVIEW:

- The first step to preventing conveyance contamination is to visually inspect the exterior and interior of conveyances.
- Simple steps may be taken to ensure that the conveyance and cargo contained therein do not present a threat to U.S. agricultural resources.
- The following slides outline “best practices” that may be adopted by trade to prevent conveyance contamination.



## Best Practices for Industry

To ensure carrier conveyances are free of hitchhiking pests, including AGM, and plant debris contaminants:

- Ensure loaded cargo is clean and free of contaminants.
- Monitor the cargo staging area to ensure the area is free from plants and plant pests.

For example, snails might attach to cargo staged in a grassy area.



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## Best Practices for Industry

To ensure carrier conveyances are free of hitchhiking pests, including AGM, and plant debris contaminants, continued:

- Monitor the cargo staging area to ensure the cargo is not under lighting that might attract insects and increase the probability of infestation.
- Utilize baits, traps, or barriers to prevent infestations from occurring in the cargo staging area. For example, salt barriers may be used to protect against snail infestations.



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## Best Practices for Industry

To ensure carrier conveyances are free of foreign animal disease fomite contaminants:

- Avoid driving through manure or wastewater.
- Park conveyances on paved areas away from livestock pens and pastures.
- Sweep, vacuum or wash conveyances to remove fomites. This is very important between visits to animal production facilities.



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## Best Practices for Industry

To ensure carrier conveyances are free of WPM with wood-boring insects:

- Require compliant WPM in the exporter's contract.
- Educate your supply chain on the regulatory requirements.
- Explore alternatives to WPM.
- Conduct a cost-benefit analysis when exploring alternatives.



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### OVERVIEW:

- Non-compliant wood packaging material (WPM) can be a significant obstacle for freight export or import.
- Ask the WPM provider if they are ISPM 15 compliant.
- Provide information on the ISPM 15 standard.
- Give them contact information regarding how to become compliant (websites, contact numbers)
- Explore alternatives to WPM:
  - Plastic or metal pallets.
  - Pallets and crating manufactured from manufactured wood products (OSB, plywood, cardboard).
- Do a cost benefit analysis if considering alternatives to WPM.
- Realize there is financial cost to the supply chain and potential ecological cost to the natural resources of the United States.

## Best Practices for Industry

- Educate all levels of your supply chain on practices for preventing carrier conveyance contamination.
- Provide personnel with training materials to detect contaminants.
- Implement recommendations to minimize risk of contamination.
- Support frequent visual inspections of cargo and carrier conveyances before arrival into the United States.



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## Benefits of Compliance

- Importers will have increased business certainty because a system of internal control helps to ensure compliant transactions.
- Fewer delays for cargo release.
- Less demurrage charges due to cargo holds.
- Avoid the expense of having your container quarantined, tarped, and treated or cleaned.



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### OVERVIEW:

When trade entities implement “best practices”, they assist CBP in their efforts to protect American agriculture.

Benefits to Industry :

- By implementing self-inspection practices for contaminants, importers demonstrate to CBP that they are committed to a trusted partnership with CBP to protect American agriculture. In turn, this may result in:
  - a reduction in CBP inspections for contaminants
  - fewer delays for cargo release
  - fewer demurrage charges due to cargo holds
  - avoidance of the expense of having your container quarantined, tarped, and treated or cleaned
- This translates into substantial monetary savings
- Importers will have increased business certainty because a system of internal control helps to ensure compliant transactions.

## Final Thoughts

- Carrier conveyance contamination can be very costly for your business.
- These costs may be in the form of delays and additional costs for treatment, storage and/or the loss of revenue from re-exportation of the entire shipment.
- Ensure all cargo and carrier conveyances are free from all types of contamination.



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### IN CLOSING:

- Outreach and education are the most important proactive measures that the trade community can use against Carrier Conveyance Contamination.
- Learning what to look for and the actions to take when contamination is detected will result in less hold overs, less treatments, and less cause for re-exportation of commodities.

## **For More Information Contact:**

Department of Homeland Security  
U.S. Customs and Border Protection  
Office of Field Operations  
Agriculture Programs and Trade Liaison

APTL Program Manager - Safeguarding

Office: (202) 344-3298

Address: DHS, CBP, OFO, APTL  
1300 Pennsylvania Ave., NW  
Room 2.5B  
Washington, D.C. 20229



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# Agriculture Programs and Trade Liaison Questions?



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