Introduction:

Threats to U.S. agricultural resources are often thought of as invasive pests and diseases that are introduced via imported "host" commodities. However, conveyances are pathways for invasive pests and diseases as well.

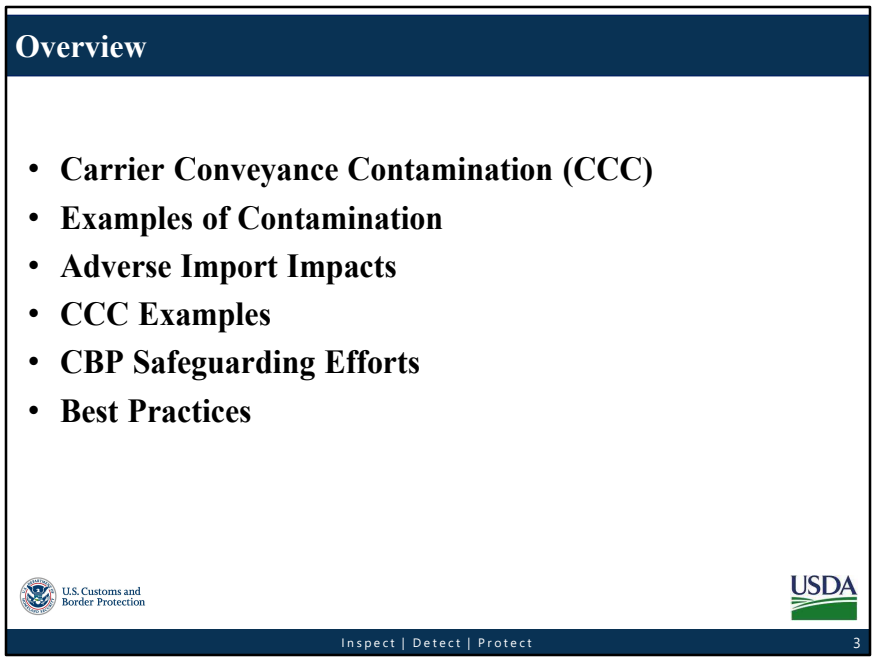
This presentation will introduce the viewer to how several types of contaminants might be introduced by conveyances, the reasons for concern, U.S. Customs and Border Protection's efforts to prevent invasive species introduction, and best practices for industry to prevent conveyance contamination.

By engaging trade entities and providing methods and techniques that will minimize contaminates in conveyances, U.S. Customs and Border Protection (CBP) aims to effect fewer delays, re-exportations, and treatments.

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

Let's get started.


Who We Are
"APTL is a **critical component of CBP's security mission** by **protecting against dangerous biological threats** to national security, thereby **ensuring safety and economic resilience** for American people and industry."



Overview:

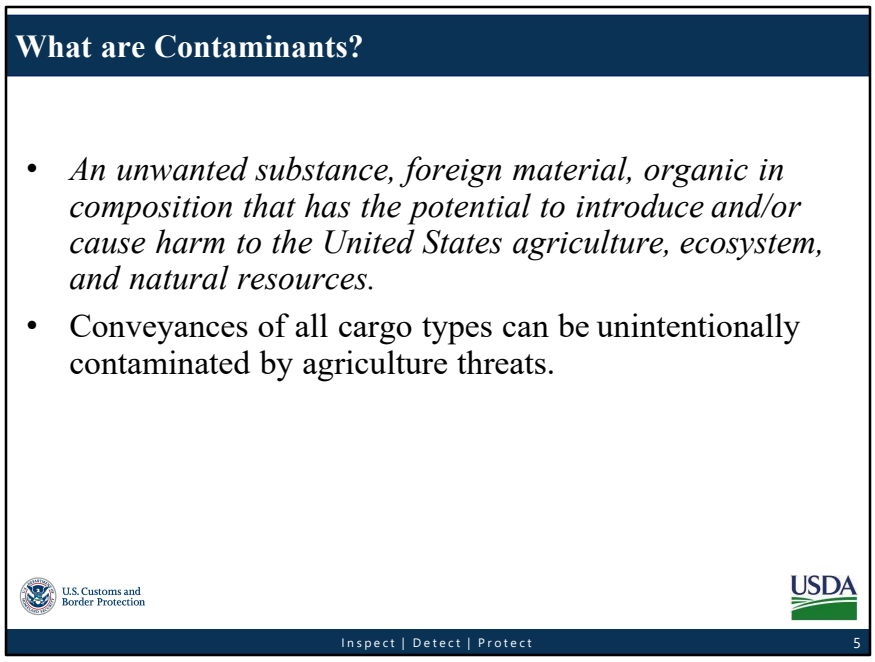
During this presentation, the following topics will be discussed:

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

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. Although the numbers vary widely, some of the current research estimates that there are approximately 50,000 (Pimentel, 2004) non-native species in the United States today. However, of that 50,000 species, approximately 4,300 have been considered invasive species. (FWS.gov)

Photo: Baltimore Field Office



Overview:

Contaminants are the presence of an unwanted substance(s) in a physical body or in the natural environment.
In biological sciences, accidental introduction of "foreign material" (contamination) can cause serious harm to United States agriculture and natural resources.
In the world of CBP agriculture specialists, these contaminants are viewed as agriculture and environmental threats, just as terrorists are security threats.
Conveyance 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.

Overview:

Contaminations are a concern for the accidental introduction of foreign pests. These pests may have no natural predators in our ecosystem allowing them to thrive. Invasive pests can be very costly to eradicate and can cause extensive damage to crops and ornamental plants.
Pictured above:
Asian Longhorned Beetle (Anoplophora glabripennis, or ALB) is a threat to America's hardwood trees. With no current cure, early identification and eradication are critical to its control. It currently infests areas in Massachusetts, New York and Ohio. It threatens recreation and forest resources valued at billions of dollars. The ALB has the potential to cause more damage than Dutch elm disease, chestnut blight and gypsy moths combined, destroying millions of acres of America's treasured hardwoods, including national forests and backyard trees.
(https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/asian-longhorned-beetle/asian-longhorned-beetle)
The first established population of ALB was discovered in 1996,.
Eradication efforts in the United States between 1997 and 2010 cost more than $373 million dollars. This included tree removals and pesticide applications.
(https://www.britannica.com/animal/Asian-long-horned-beetle)

In today's global economy, the volume of international trade brings increased 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 expenditures have reached into the billions of dollars.
There are estimates that the economic impacts from invasive species exceed $1 billion annually in the United States.
This cost is in addition to the damage the invasive species cause to hundreds of millions of acres of native ecosystems and associated native plants and animals.

Asian Long Horned Beetle
This insect is believed to have been introduced into the United States in contaminated WPM carried in cargo ships or airplanes originating in its native Asia.
This beetle is native to China and the Korean Peninsula and is in the wood-boring beetle family Cerambycidae.
First discovered on ornamental trees in New York City and Chicago.
Detections have been made in most states in the northeastern portion of the United States as well as California beginning in 1996.
Females chew oviposition cavities in tree trunk bark and branch junctions, or the trunk.
Mature larva destroy the quality of the wood.
Trees require removal, treatment to destroy in all life stages, and replacements.
Photos:
Left: USDA APHIS https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/asian-longhorned-beetle/asian-longhorned-beetle#:~:text=The%20ALB%20has%20the%20potential,Beetle%20(ALB)%20Informational%20Website.
Right: USDA APHIS Julie Twardowski
https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/asian-longhorned-beetle/ct_gallery
elatedonion774w

Overview:

- The pictures above illustrate the devastating effects that can be caused by invasive wood-boring insects.
- Taken a four years apart (2009 to 2013), drastic mitigation was necessary to prevent the establishment and spread of ALB.
- There are no methods developed to prevent or control ALB. The only known way to combat ALB infestations is to destroy mature trees.

Photos: Granville Ave, Worcester, MA before and after photos Kenneth R. Law, USDA APHIS PPQ

Overview:

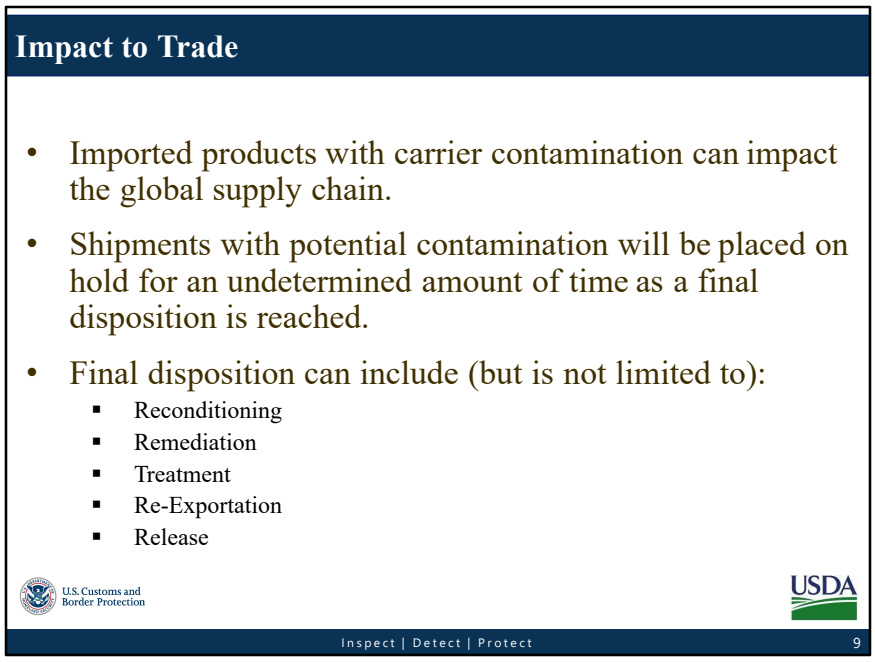
- The impact of invasive species introduction is not limited to the effects on plants.
- Foreign animal diseases are capable of being transmitted by contamination.
- In addition to foreign invasive pests, contaminants can also pose a serious risk to the nation's livestock industry in the form of Foreign Animal Diseases.
- The example shown above is African Swine Fever (ASF).
- Current statistics on ASF region and country outbreaks can be found at the Food and Agriculture Organization of the United Nations website http://www.fao.org/ag/againfo/programmes/en/empres/ASF/Situation_update.html

African Swine Fever (ASF) highly contagious hemorrhagic viral disease of domestic and wild pigs.

- ASF is a devastating, deadly disease that would have a significant impact on U.S. livestock producers, their communities and the economy if it were found here. There is no treatment or vaccine available for this disease. The only way to stop this disease is to depopulate all affected or exposed swine herds.
  - It is called by a large DNA Virus of the *Asfarviridae* family

- Not present in the United States
- Transmitted and spread through
  - Direct contact with infected pig
  - Indirect contact, through ingestion of contaminated material (e.g. food waste, feed, or garbage)
  - Contaminated fomites, or biological vectors
- Signs of ASF
  - High fever
  - Decreased appetite and weakness
  - Red, blotchy skin or skin lesions
  - Diarrhea and vomiting
  - Coughing and difficulty breathing

Photo:
Infected pig 14 days after detection of the disease
https://www.pig333.com/articles/are-we-ready-to-recognize-african-swine-fever-in-the-field_14983/



Overview:

- Discovery of contaminants can result in delay of shipments to supply chains to loss of products.
- A delay could range anywhere from hours to months depending on country of origin, commodity type, availability to ship out of the country, etc.
- If carriers are re-exported they might have to return to country of origin or out of country.
- Reconditioning shipments takes time and can be very expensive.
- Rejected carriers are subject to re-inspection upon arrival.
- All delays in the release process can also affect the quality of the shipment and marketability.

Examples of Contamination

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Examples of Contamination

- Federal Noxious Weed (FNW) Seeds
- Hitchhiking Pests
- Plant Debris
- Soil Contamination
- Fomites of Foreign Animal Disease (FAD)
- Wood Packaging Material

U.S. Customs and Border Protection

USDA

Overview:

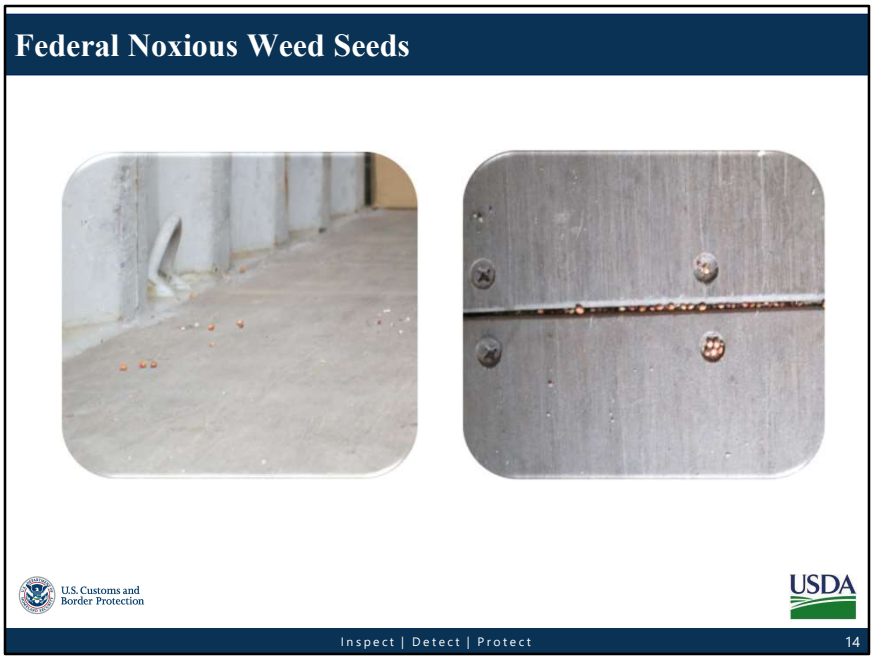
- A Federal Noxious Weed (FNW) is an invasive plant species introduced into a non-native ecosystem.
- Since FNW lack co-evolved competitors and natural enemies to control their populations, they are likely to cause harm.
- Impacts of invasive weed introduction:
    - Invasive weeds are a leading cause of crop yield 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.
    - In the United States, it is estimated that invasive weeds occur on more than 17 million acres, with similar infestations occurring in Canada and Mexico.

    Photo credit: Seattle Field Office

Overview:

- There are many challenges to detecting Federal Noxious Weed seeds in conveyances.
- Seeds tend to be small and can be in places that require manipulation of the cargo.

Photos:
FNW seeds attached to imported, non agriculture cargo, Seattle Field Office



Overview:

- Contaminants are not just associated with the cargo. Containers themselves can also be a vessel for carrying unwanted contaminants.
- Regular cleaning of the container will ensure an accidental introduction of Federal noxious weed seeds does not happen.

Photos:
FNW Seeds on floor of container and inside cracks, Seattle Field Office

Overview:

- The outside of the container is just as important as the inside.
- Containers left sitting on ground for long periods of time are high risk for collecting unwanted contaminants.

Photos:
Left: FNW seeds clumped onto outside of truck, Seattle Field Office
Right: Sprouting FNW seeds found on pallets, Seattle Field Office

Overview:

- Hitchhiking pests are those pests that are found associated with commodities not generally known to be hosts for the pest; i.e. the pest does not feed on the commodity.
- Similarly, hitchhiking pests may be found on carrier conveyances where no hosts exist.
- Pests may simply “hitch” a ride on the carrier conveyance because at some point in the supply chain, the carrier conveyance was near or on a host.
- Plant debris might contaminate a carrier conveyance as residual matter remaining from previous shipments.
- Hitchhiking pests and plant debris pose agricultural risks because they are pathways for the introduction of the invasive species.

Photos:
Left: Snail on container, Seattle Field Office
Right: Snail on outside of container, Baltimore Field Office

Overview:

- Temperate terrestrial gastropods, such as snails and slugs can:
    - Cause damage by feeding on agricultural and horticultural crops as well as native plants, thereby lowering crop yields 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 mass 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.
- Given their propensity to climb on upright objects in temperature extremes, carrier conveyances remaining in and around vegetation provide opportunities for snail and slug contamination.

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

Photo: Slug on blue background, photo credit Stephen Brady, APTL

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Photos
Hitchhiking snails on rim of tire, Laredo Field Office

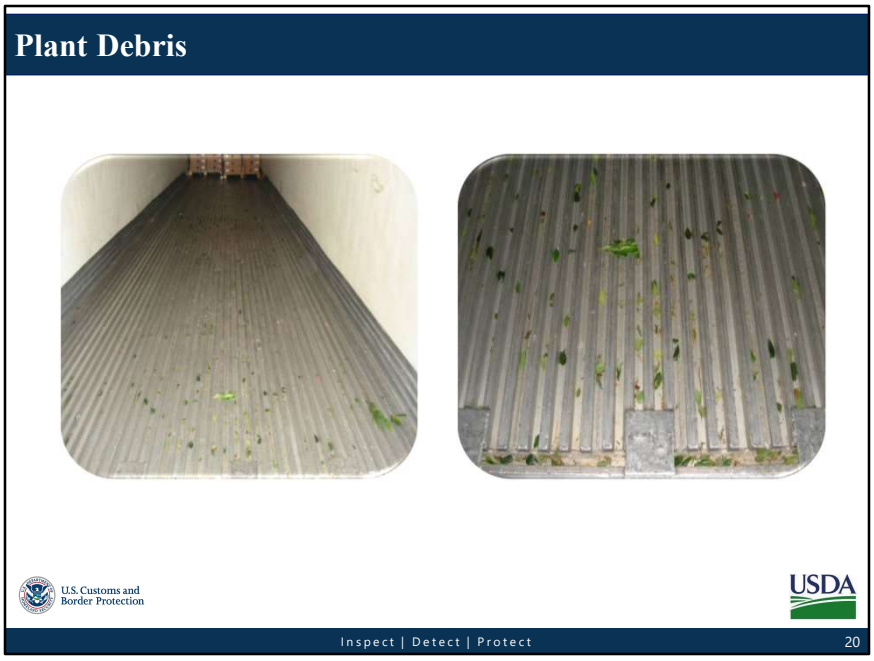
Information obtained from USDA APHIS PPQ's NPRG: Temperate Terrestrial Gastropods

Overview:

- Beekeeping is an essential component of modern U.S. agriculture, providing pollination services for more than 90 commercial crops and adding $15 billion in value.
- Since the 1980s, however, a number of factors have contributed to the declining health of U.S. honey bee colonies.
- These include the introduction of several honey bee pests into the United States, such as the small hive beetle, which can damage honey comb, stored honey and pollen, as well as deadly bee parasites such as the Varroa mite, tracheal mite, and single-celled gut parasite *Nosema ceranae*.
- Honey bees also face a number of newly introduced diseases caused by viruses, bacteria and fungi.
- Thus, a swarm of bees hitchhiking on an aircraft or a vessel superstructure may be a pathway for these parasites to be introduced into local honey bee colonies.

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

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 of concern.
- 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 known to be found on citrus leaves.
- The Asian citrus psyllid is a vector for 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.
    - HLB can cause bitter, greening fruit that cannot be marketed.
- While 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:

Trailer floor contaminated with leaf debris, Tucson Field Office

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.
- Foreign soil could lead to the introduction of several unwanted pests such as insects, seeds, and snails.
  - Foreign soil can introduce things not seen with the naked eye such as bacteria, viruses and nematodes.

Photos
Right: Soil contamination on used forage harvester imported from Argentina, Los Angeles Field Office, 7/24/2013
Left: 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

Photos
Left: Vehicle wheel well caked with soil, Tucson Field Office
Right: Soil contamination on a container floor, El Paso Field Office, 04/14/2014

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 (FAD) 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 (CSF), foot-and-mouth disease, or influenza.

Photos
Left: Blood contamination on the floor of a container. Tucson Field Office, 8/16/2020
Right: Animal manure contamination on empty horse trailer. El Paso Field Office, 06/30/2011

Overview:

- Dead animals can transmit several types of diseases to humans, pets, livestock, and wild animals.
- Anthrax is caused by the bacterium *Bacillus anthracis*.
  - If a dead animal has it, it can be contagious for many years after its death.
- Dead animals can also be a host of parasites such as mites, ticks, or fleas.

Photos:
Wild pig (javelina) struck by train and dragged, contaminating train, Laredo Field Office

Overview

- 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):

- With a highly pathogenic strain of avian influenza (including H5N1 strain): a few poultry deaths may occur over several days, followed by rapid spread and a mortality rate that can then approach 100% within 48 hours.
- Avian influenza viruses can be spread through direct contact with secretions from infected birds, especially feces or through contaminated feed, water, equipment and clothing.
- Apart from being highly contagious among poultry, avian influenza viruses are 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 (37ºC), H5N1 viruses have been shown to survive in fecal samples for six days.

Photos
Left: Birds nest found in rail car, Tucson Field Office
Right: Animal manure contamination on a maritime vessel, Baltimore Field Office

Overview:

- Dead rooster found inside rail car.
- Live and dead birds can possibly transmit animal diseases such as Newcastle Disease or Highly Pathogenic Avian Influenza wild and domestic poultry in the US.

Photo: Laredo Field Office

Overview:

- The Asian gypsy moth (AGM), including *Lymantria dispar asiatica, Lymantria dispar japonica, Lymantria albescens, Lymantria umbrosa,* and *Lymantria postalba)* is an exotic pest not known to occur in the United States.
- AGM larvae feed on a much broader range of plant species, covering over 100 botanical families. This broad range of possible host plants, combined with the female's ability to fly long distances, could allow AGM to spread rapidly.
- Large infestations of AGM can completely defoliate trees, leaving them weak and more susceptible to disease or attack by other insects.
- If defoliation is repeated for 2 or more years, it can lead to the death of large sections of forests, orchards, and landscaping.
- Any introduction and establishment of AGM in the United States would pose a major threat to the environment and the urban, suburban, and rural landscapes.
- Ships are also inspected for AGM when they arrive at U.S. ports.

Photo:
Preparing for an AGM inspection, Baltimore Field Office

Overview:

- If established in the United States, AGM could cause serious, widespread damage to our country's landscape and natural resources.
- Each AGM female can lay hundreds of eggs in fuzzy egg masses that, in turn, yield hundreds of voracious caterpillars that may feed on hundreds of tree and shrub species. AGM caterpillars can defoliate plant at an alarming rate. This defoliation can severely weaken trees and shrubs, killing them or making them more susceptible to diseases and other pests and destroying habitats for mammals and birds. Caterpillar silk strands, droppings, destroyed leaves, and dead moths would also be a nuisance in homes, yards, and parks.
- AGM females are active fliers. Their ability to fly long distances makes it probable that AGM could quickly spread throughout the United States
- The AGM matures through four life stages: egg, larva (caterpillar), pupa (cocoon), and moth. AGM egg masses may be found on tree trunks, limbs, or leaves, as well as on stones, walls, logs, lawn furniture, and other outdoor objects. Each egg mass can contain hundreds to more than 1,000 eggs.
- The mass is covered with buff or yellowish fuzz from the abdomen of the female. While the velvety egg masses average 1 ½ inches long and three-fourths of an inch

wide, they are often as small as a dime.

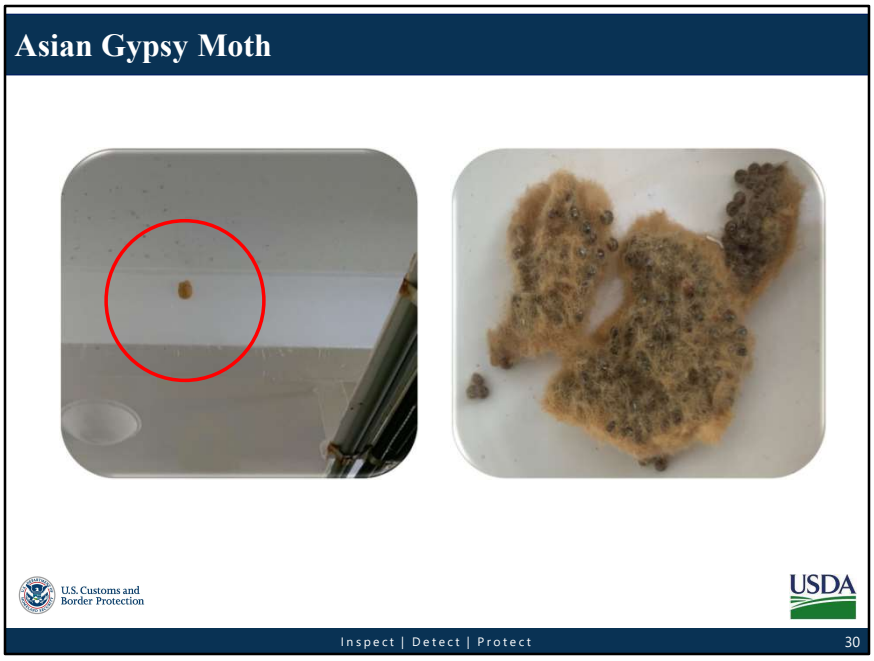
- AGM infestations spread in several ways. Adult female moths may fly to previously uninfested areas to lay eggs. Or, newly hatched AGM caterpillars may climb to tree crowns, where the wind picks up their silken threads and carries them to other areas. In addition, people can inadvertently transport egg masses or pupae. AGM egg masses tolerate extremes in temperature and moisture and travel well on logs, lawn furniture, nursery stock, pallets, shipping containers, and the hulls and rigging of ships.

Photos:
AGM suspected egg masses on outside of ship, Seattle Field Office

Overview:

- AGM females lay egg masses that can yield hundreds of caterpillars that have the potential to defoliate over 600 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 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: Seattle Field Office



Overview:

- CBP conducts vessel inspections.
- CBP targets vessels by risk-based priority.
- APHIS provides risk-related data on countries where AGM is known to exist.
- APHIS determines inspection procedures

- Any AGM detection on a vessel may require the vessel be:
  - Ordered out of port and into international waters
  - Required to undergo treatment
  - Re-inspected
  - Refused entry

Photos: Seattle Field Office

Overview:

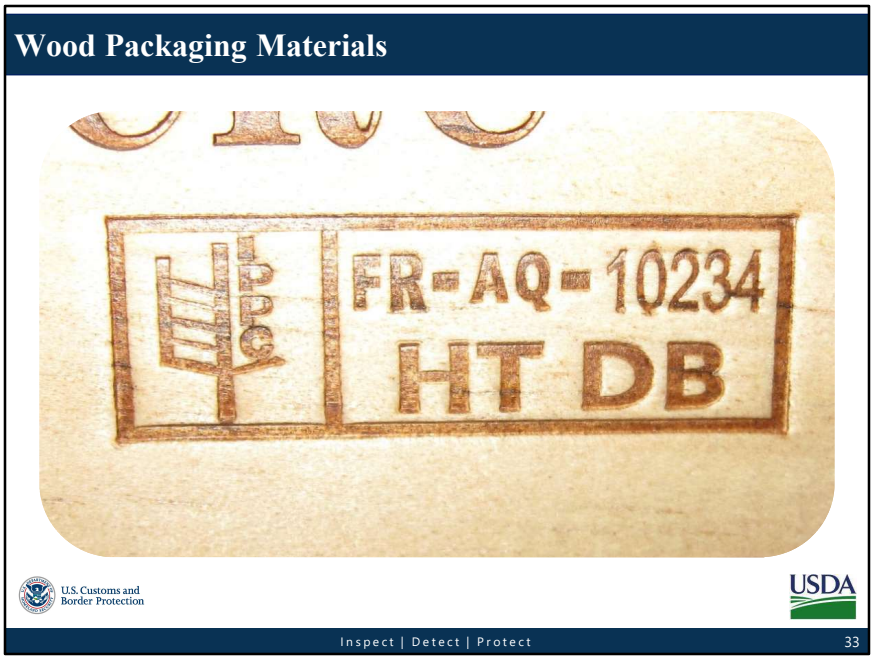
- Inspect the superstructure.
- Perform a “walk- around” visual inspection of containers on the deck.
- Inspect areas exposed to bright lights. Female AGM tend to lay eggs near light sources.
- Moths also tend to shelter their eggs from the elements.
- Inspect sheltered areas such as deck edges and open doorways leading to shelter.
- Inspect cables and supports both in front of and behind areas leading to the superstructure of the ship.
- Inspect behind walls and doors.
- Inspect hard to reach locations
- AGM egg masses may be found on lines used to moor the vessel or on extra lines laying on the deck, containers, safety rails and supports, wheelhouses, underneath pallets, outside hull, barrels, garbage cans, ladders, etc.
- AGM egg masses may be found on anything:
  - Cargo hold framing
  - Air intake vents
  - Vessel smoke stacks
  - Equipment

Photos: Seattle Field Office

Overview:

- There are significant pest risks associated with wood packaging material (WPM), which also threaten American agriculture and forests.
- Unchecked spread of wood boring pests could cause billions of dollars of damage to ornamental trees and forests and lumber industries.
- Trading partners could experience increased costs due to non-compliant WPM.

Photos: SAIR3807IN01302017H Five Shipments of Chinese Auto Parts with Adult Bark Beetles at DTW
Large: Detroit Metropolitan Airport-CBP-Jan. 30, 2017
Small: Romulus – USDA PPQ



Overview

- As countries around the world were searching for solutions to the spread of timber-based diseases and pests, the International Standards for Phytosanitary Measures No. 15 (ISPM 15) was developed.
- ISPM 15 is a set of regulations stipulating specific criteria that must be met when using any wood packaging for international trade.
- ISPM 15 requires that WPM is heat treated or fumigated with methyl bromide and stamped or branded with a mark of compliance.
- WPM entering the US without a stamp are uncompliant, regardless of the presence of pests.
- **WPM entering the US with a compliant stamp can still harbor wood boring pests.**
- CBP commonly encounters fraudulent stamps.
- Over 180 countries participate in ISPM 15.

Photo: https://en.wikipedia.org/wiki/ISPM_15

Overview

- Different types of wood packing material used to import not only agricultural, but also non-agricultural products.
  - Bins
  - Boxes
  - Bracing
  - Cable Spools
  - Cases
  - Crates
  - Dunnage
  - Load Boards
  - Pallets
  - Pallet collars
  - Skids

Photos:
Left: Baltimore Field Office
Right: Scolytidae damage on WPM, Tucson Field Office

Overview:

- Dunnage by definition does not have associated cargo, but is loose packing material, generally wood, protecting cargo from damage during transport. It is typically used as bracing or spacers.

- Photos: Baltimore Field Office

Overview:

- Alternatives to WPM:
    - Plywood or press board
    - Plastic pallets
    - Oriented strand board
    - Hardboard
    - Parallel strand lumber
    - Synthetic foam
    - Metal frames
    - Inflated dunnage
    - Masonite veneer

Photos: Seattle Field Office

Overview:

Examples of WHAT IS NOT WPM

- In general, WPM does not include:
  - WPM made entirely from thin wood 6 mm or less in thickness
  - WPM made wholly of processed wood material, such as:
    - plywood
    - particle board
    - oriented strand board or veneer that has been created using glue, heat or pressure, or a combination thereof
  - Sawdust
  - Wood shavings
  - Wood wool

Photos: Crates and bracing from WPM Trade Outreach


Safeguarding Efforts
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Overview:

- When a FNW is found, one mitigation that is sometimes offered is cleaning.
- Often times, the whole container and contents will have to be vacuumed.
- All debris will then have to be incinerated according to regulations.
- This is costly.

Photo: Tucson Field Office

Overview:

- Sweeping inside of container and inspecting sweepings for plant debris and FNW

Photos: Seattle Field Office

- CBPAS are trained to inspect every aspect of a shipment, specifically searching for the presence of contaminants.
- Quarantine tape is used a visual indicator Ag quarantine and a safeguarding measure against tampering.

Photos: Seattle Field Office

Overview:

- Outside and under container inspection.

Photo: Seattle Field Office

After a hitchhiking snail is discovered, CBP Agriculture Specialists place a salt ring around the cargo as a safeguarding procedure that will prevent these potentially invasive pests from entering the US ecosystem.

Photo: Baltimore Field Office

Overview:

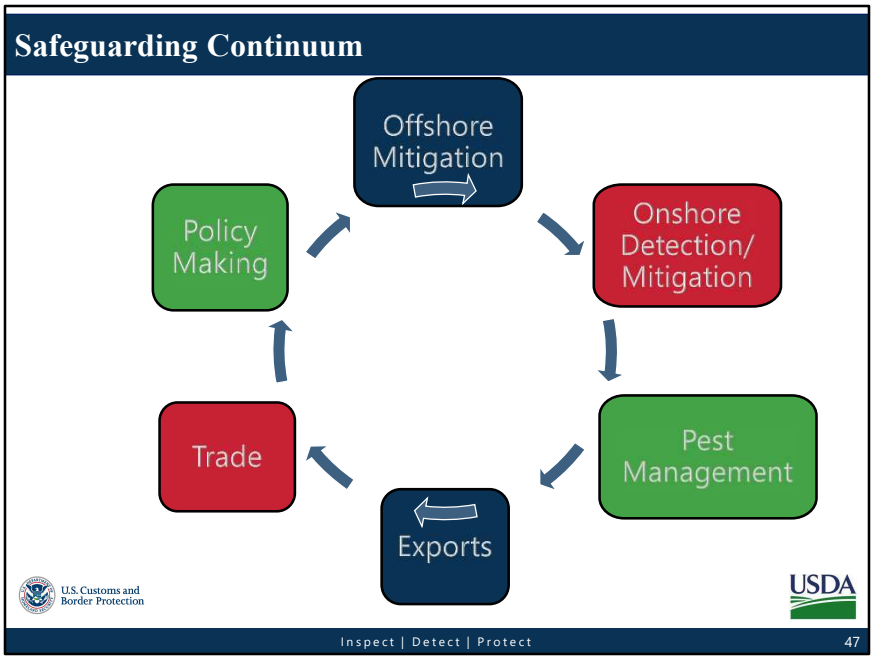
- CBP personnel inspect vessels for Asian gypsy moth (AGM) egg masses.
- Hand mirrors are used to inspect in certain areas, such as behind light fixtures, where the moths may be attracted and seek shelter from the elements.

Photos:
CBP Agriculture Specialists conducting AGM vessel inspections.

Photos: Seattle Field Office

Best Practices for Prevention

46



Overview:

- Safeguarding begins with the trade community and their ability to prevent contaminants.
- Educating the industry about the different risks that can affect their shipments **during every step of the supply chain** allows them the opportunity to inspect their conveyances and commodities for harmful agriculture contaminants prior to arrival in the US, preventing unfavorable enforcement actions.
- CBP acts as the last line of defense and enforcers.
  - CBP prepares, presents, and distributes as much outreach as possible to industry and stakeholders on programs such as Asian Gypsy Moth, Customs-Trade Partnership Against Terrorism (C-TPAT), WPM, etc.

Best Practices for Prevention

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.

Best Practices for Prevention

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

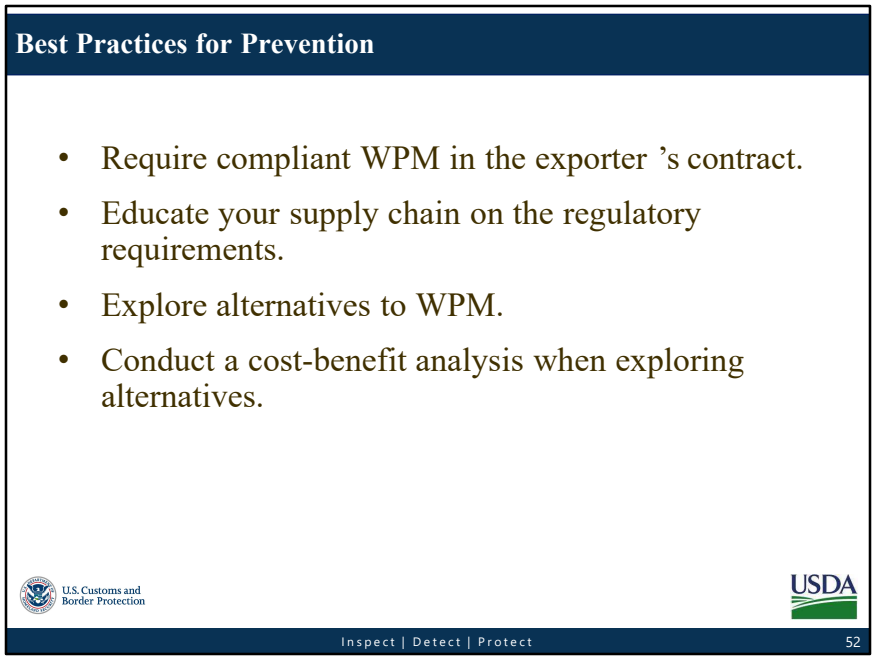
- Ensure loaded cargo is clean and free of contaminants.
- Monitor the cargo staging area to ensure the area is free from plants and plant pests.
- For example, snails might attach to cargo staged in a grassy area.

Best Practices for Prevention

- 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.

Best Practices for Prevention

- 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.



Overview:

Alternative to WPM include but are not limited to:

- Plastic pallets
- Plywood or compressed wood pallets and crating
- No WPM if not necessary
- Cardboard pallets

Best Practices for Prevention

- 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.

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, treated, and/or cleaned.

Summary

- 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.

For Additional Information:

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