

Welcome to Module 8: International Movement of Horses. This presentation was developed as supplemental training for the USDA-APHIS National Veterinary Accreditation Program (NVAP) by the Center for Food Security and Public Health at the College of Veterinary Medicine, Iowa State University. The content for this module was finalized in July 2017. *Presenters: As designed, slide completion time ranges from 30 to 90 seconds each, such that the entire presentation can be completed in 60 minutes.*

S Required

i Sign-in
-iPad or paper
• Retain certificate of completion
• Complete 2-step process to renew accreditation
- Complete modules
- Submit an application

A few important points about the renewal process, first you must sign in to get credit for taking each APHIS Approved Supplemental Training Module. This will either be done using a paper sign in sheet that is being passed around or the iPad that is being passed around. Second, at the end of the presentation you will receive a certificate of completion, this is your proof you have completed the module. Please retain this for your records. Do not send it to APHIS as part of the renewal. You must submit an application for renewal as part of the two-step renewal process. This can either be done online or via paper. Both processes are described on the NVAP website.

 In order for the key pad to display, the participants must first tap the first field on the screen (first name field). This will display the key pad. The participant must then either tap the stylus pen or their finger into each subsequent field on the screen. The user must tap into each field. Enter your entire National Accreditation number including leading 0's.

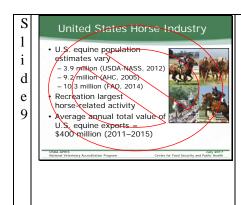
However, if they have not entered the data the way it is entered into our database, they will get a No Match Found message. They should attempt to re-enter the data two more times and then pass the tablet to the next participant. They must see the instructor after the presentation to ensure they do get credit for the module they have taken. Certain reasons their name is not displayed include: Their name is not entered correctly - James vs Jim, McDonald vs Mcdonald vs Mc Donald, etc.

If a paper sign in is being used, please make sure you print clearly Paper Sign-In or you may not get credit for the AAST module. It is critical that 1 we have your updated email address to ensure you receive Print clearly i Complete ALL fields notifications from NVAP. If you do not know your six digit d • If you do not know your 6 National Accreditation Number (NAN), please see the instructor e digit National Accreditation after the presentation. 5 Number, please see us after Presenters: All APHIS Approved Supplemental Training S Supplemental Training 1 (AAST) modules are also available on our Website with interactive features and links to additional Web resources. i All APHIS Approved Supplemental Training To access them, type "NVAP" into your search engine, e.g., d (AAST) modules are also available on our Website with interactive features and links Bing, Google, Yahoo, etc. to additional Web resources. e Type "NVAP" into your search engine, 6 e.g., Bing, Google, Yahoo. S Presenters: Please make sure your audience understands the Supplemental Training intent of this information by reading what is written here. This 1 Familiarize accredited veterinarians informational presentation is intended to familiarize accredited i (AVs) with animal health regulatory concepts and activities veterinarians (AVs) with animal health regulatory concepts and d - Does not supersede regulations activities. Information presented here does not supersede the For the most up-to-date regulations e and standards, please refer to: regulations. For the most up-to-date regulations and standards, 7 -Code of Federal Regulations please refer to the Code of Federal Regulations and your local -Local Veterinary Services (VS) District Veterinary Services (VS) District Office. S After this presentation, you will be able to: Overview describe the economic importance of the U.S. equine industry; Economic importance of U.S. equine industry recognize that international travel of horses is the major i Risk of international travel contributing factor to the global spread of equine diseases; spreading disease d Resources to ensure horses meet locate and correctly determine the requirements and international movement requirem Roles and responsibilities of AV procedures that must be completed to export U.S. horses; Solely responsible for signed documents 8 · Perform testing, identification, perform your roles and responsibilities as an AV; and immunizations Successful completion of recognize that you are solely responsible for all aspects of the export process documents you sign regardless of who assists you in preparing them:

recognize that only you or another AV may perform all of the testing, identification, and immunizations which may be

fully and properly perform all facets of the export process.

required for horses to travel; and



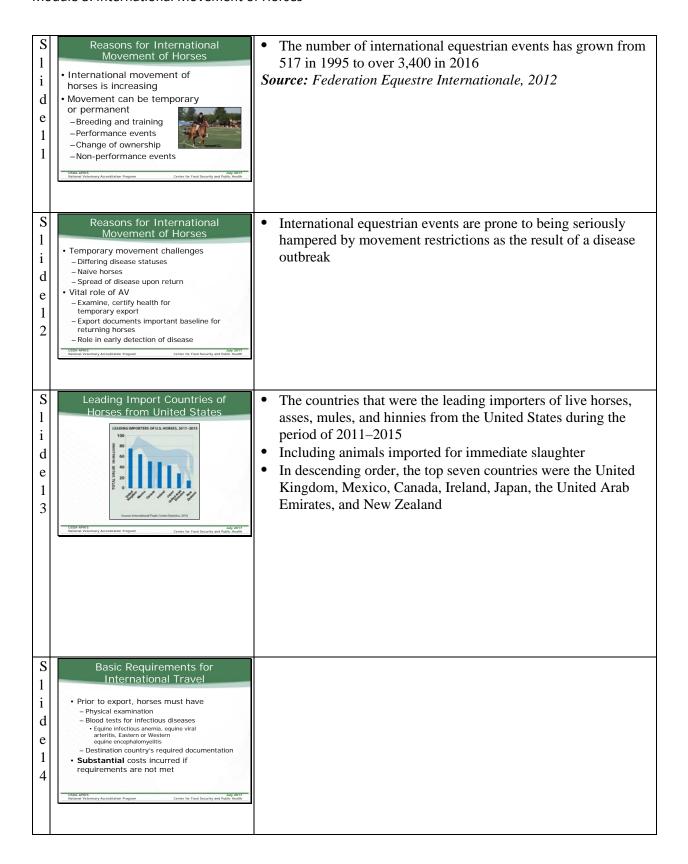
- Five States with the highest equine population were Texas (459,000), Oklahoma (172,000), Kentucky (154,000), California (149,000), and Florida (130,000)
 - Only farms and ranches producing more than \$1,000 in agricultural products or sales annually were included in the census. Horses used solely for racing, showing, or recreation were not included.
- True estimate of the number of horses in the United States is difficult to determine due to the variety of purposes they are used for, from agriculture to recreation.
- U.S. horse industry is a key contributor to the overall national economy.
 - 2005 AHC economic survey reported that horse industry annually contributes approximately 39 billion USD in direct economic benefits and 102 billion USD in indirect impacts, i.e., induced spending to the U.S. economy

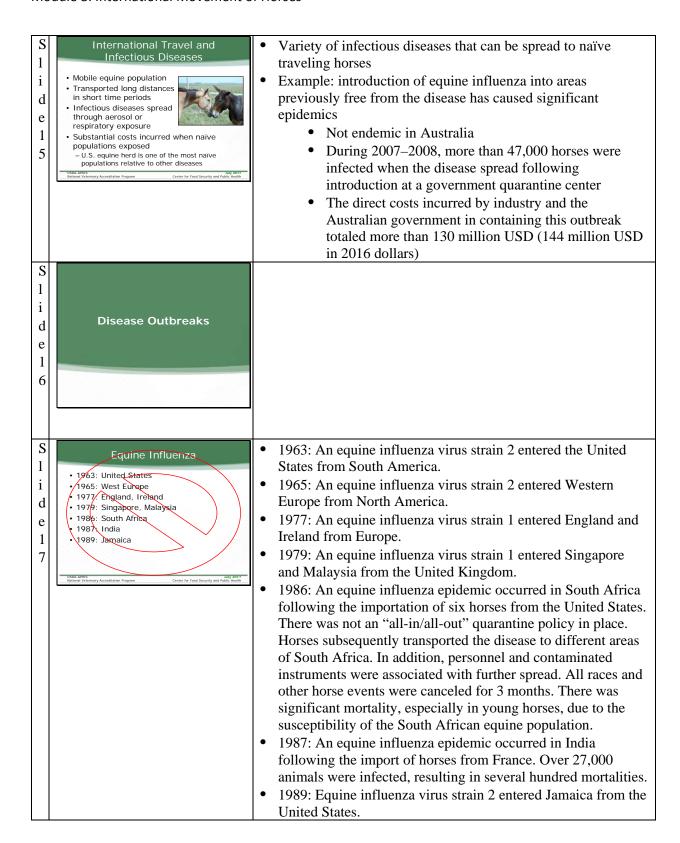
• Sources:

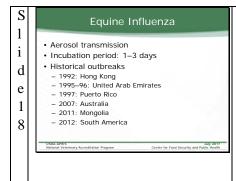
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- USDA Census of Agriculture. 2012 Census Publications. Available at:
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- USDA Foreign Agricultural Service (FAS) Global Agricultural Trade System. Available at http://apps.fas.usda.gov/GATS/default.aspx. Accessed May 12, 2016.

S International Movement of Horses Horses travel internationally more frequently than any other species - 2015: 52% of total live animal exports from United States - Multiple trips to and from foreign countries - Single most important factor in global spread of equine infectious diseases AVS: - Protect health of U.S. horses - Prevent negative impact on equine health and economy USBIC-UNITS - AURY STATE - Contex for fault Security and Public Health - Contex for fault Security and Public Health

- Poultry represented the next largest live animal export sector at just 20% (*Source: U.S. Census Bureau*)
- Work with your clients as they import and export horses and equine germplasm (e.g., semen, embryos)







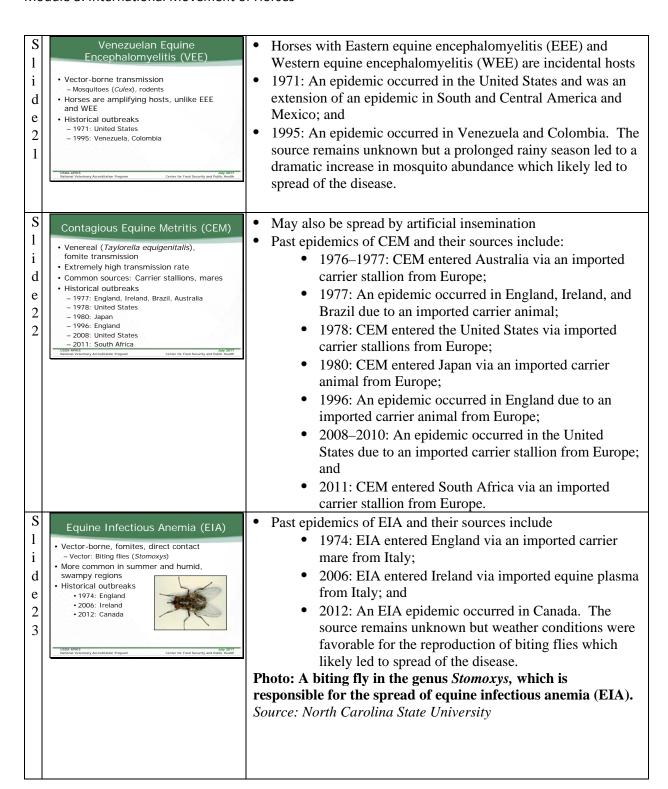
- Eight documented outbreaks of equine influenza involving the international movement of horses prior to 1992
- Since that time, historical outbreaks have included the following:
 - 1992: An outbreak occurred in Hong Kong following the importation of infected horses from England and Ireland. Despite vaccination, half of Hong Kong's horses developed clinical signs. Racing was severely disrupted and seven races were canceled. The economic loss was estimated to be approximately 1 billion USD (1.7 billion USD in 2016 dollars). Vaccination did not protect 75% of the horse population in Hong Kong from being infected in this outbreak, but it reduced the length of disease and severity.
 - 1995–1996: Equine influenza virus strain 2 entered the United Arab Emirates (Dubai) from the United States.
 - 1997: Equine influenza virus strain 2 entered Puerto Rico and the Philippines from the United States.
 - 2007: An outbreak spread from an infected horse even after being detained for the designated time frame at the quarantine center in the Australian State of New South Wales resulting in more than 41,000 horses being infected. The origin was thought to be quarantined breeding stallions from Japan where an equine influenza outbreak was occurring.
 - 2011: An outbreak occurred in 18 of the 21 provinces of Mongolia. A total of 40 horses were confirmed to have been affected by the outbreak; however, more than 74,000 were susceptible to the virus. The origin of the outbreak remains unknown.
 - 2012: An outbreak spread across multiple countries in South America. The outbreak was initially reported in Chile and then spread to Brazil, Uruguay, and Argentina. Both vaccinated and unvaccinated animals were affected. The origin of the outbreak remains unknown.

Equine Viral Arteritis (EVA) · Aerosol, venereal transmission i · Clinical signs: conjunctivitis, nasal discharge joint swelling, abortion d · Historical outbreaks = 1984: United States e 1986-87: United States 1993: England 1 - 1994-98: South Africa 1996–2000: United States 9 - 2006-07: United States

- Aerosol transmission occurs when acutely affected horses excrete the virus and expose others in close contact
 - Particularly relevant when horses are gathered at racetracks, sales, shows, and other events
- **Venereal** transmission from carrier stallions is particularly significant on breeding farms
- Clinical signs include depression, conjunctivitis, nasal discharge, skin rash (often localized to the cheeks or side of the neck but can be generalized), swelling of the legs and joints, swelling of dependent parts of the body including the mammary glands or scrotum, abortion, pneumonia or pneumonia with enteritis in very young foals, fever, and loss of appetite.
- 1984: EVA was introduced to 41 Thoroughbred breeding farms in Kentucky by an unidentified source. The U.S. equine industry experienced devastating animal health effects due to abortion and also due to economic losses, primarily as a result of restrictions on international trade. The international community has kept many of these restrictions in place since this initial outbreak.
- 2006–2007: An outbreak of EVA that originated from a Quarter Horse breeding farm in New Mexico and spread to premises in five additional States (Alabama, Kansas, Montana, Oklahoma, and Utah).
- Other important historical sources of EVA include the following:
 - 1986–1987: EVA entered the United States via an imported carrier stallion or semen from Europe;
 - 1993: EVA entered England via an imported carrier stallion from Europe;
 - 1994–1998: EVA entered South Africa via imported semen from Europe; and
 - 1996–2000: EVA entered the United States via imported carrier stallions or semen from Europe.
- Past epidemics of AHS and their sources include
 - 1959: AHS was imported into the Middle East. Southwest Asia, and India from an epidemic in Africa;
 - 1987: AHS entered Spain and Cyprus via an imported zebra from Namibia:
 - 1989: AHS entered Morocco and Portugal due to the extension of an epidemic in Spain;
 - 1999: AHS entered South Africa via an imported carrier animal; and
 - 2011: An AHS outbreak began in South Africa from a domestic stallion that died suddenly.

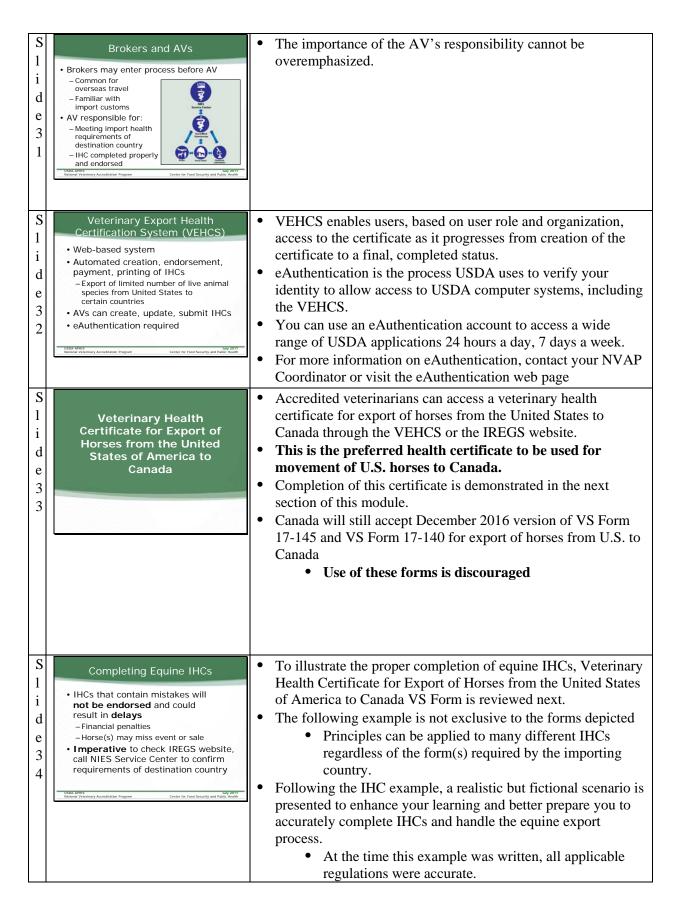
Photo: Biting midges of the genus Culicoides, which are an appropriate vector for African horse sickness. Source: Wilson, Darpel, and Mellor, PLoS Biology.

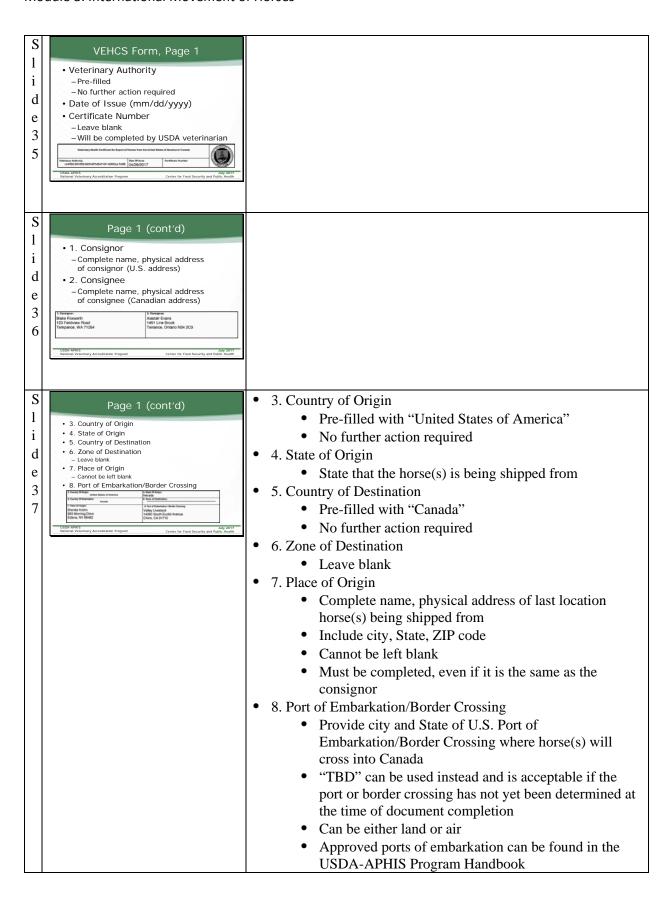
S African Horse Sickness (AHS) Non-contagious, infectious disease that requires an appropriate vector - Biting midge (Culicoides) d Historical outbreaks - 1959: Middle Fast, Southwest Asia, India e 1987: Spain, Cyprus - 1989: Morocco, Portugal 2 - 1999: South Africa - 2011: South Africa

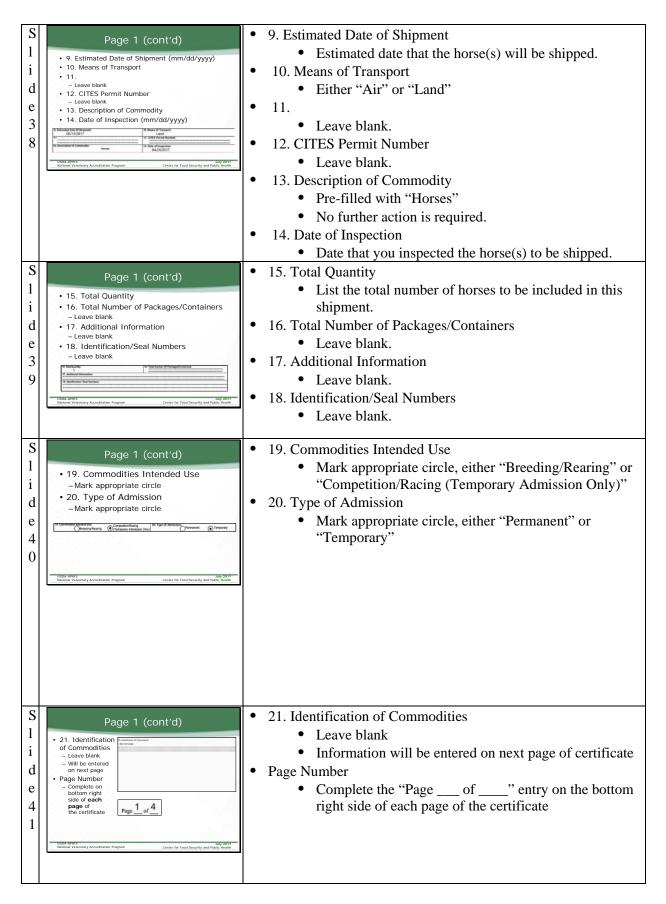


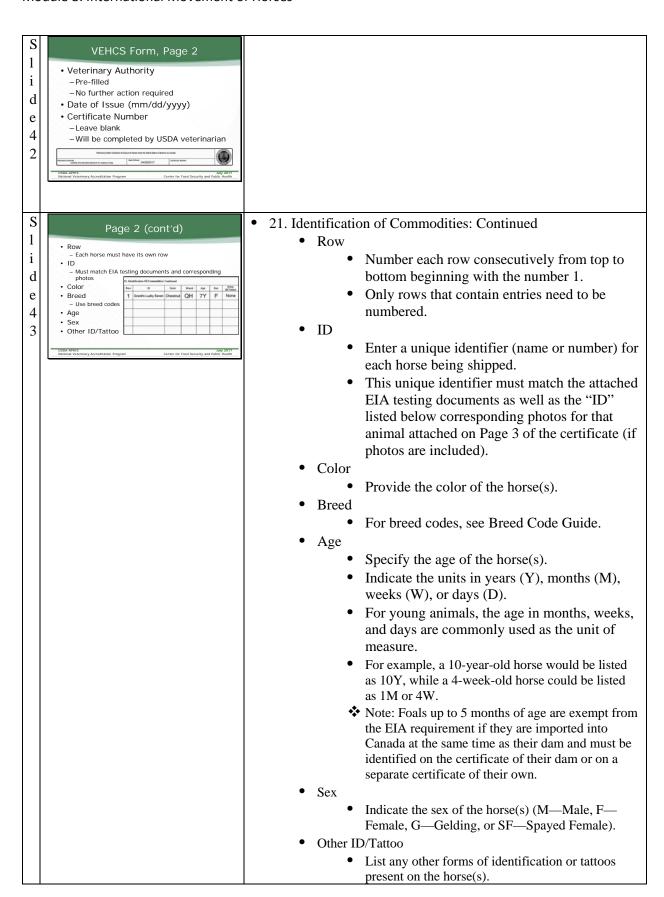
Vectors: Adult and nymphal ticks in the genera *Dermacentor*, **Equine Piroplasmosis** Hyalomma, Rhipicephalus, and Amblyomma · Vector-borne (ticks), fomites, direct contact Intrauterine infection of the foal (direct contact) is i • Etiology: Protozoa (Babesia caballi and Theileria equi) d particularly common with T. equi · Historical outbreaks • 1959: United States Past epidemics of equine piroplasmosis and their sources e • 2009: United States 2 include 1959: An epidemic occurred in the United States due 4 to imported horses from Cuba infected with Babesia caballi; and 2009: An epidemic occurred in the United States. A new competent vector, Amblyomma cajennense, the cayenne tick, was identified as the source of the outbreak. S Section Summary 1 Frequent international travel of horses i Single most important factor in global spread of equine infectious diseases d Numerous outbreaks caused by international movement of infected horses e - Indicates ease of introduction and spread 2 Disease introduction negatively impacts owners, trade, economy of countries 5 S Next section provides instruction on the correct procedures for completing International Health Certificates (IHCs) Instructions in the next sections are designed to illustrate i International Health concepts—instruction is generic and concepts are applicable d Certificates for many destination countries e 2 6 S Requirements are not established by the United States Overview of U.S. Export Process A web link to the list of NIES Service Center Contacts by · Export requirements vary between State can be found on the NVAP website i species, countries Foreign countries' import requirements must Always verify the current requirements for each shipment by d be met before export Contact NIES Service Center as early first contacting your local NIES Service Center e Discuss plans, obtain current regulations, tests, 2 and required inspections · IREGS website lists requirements for 7 - Never rely solely on regulations provided online

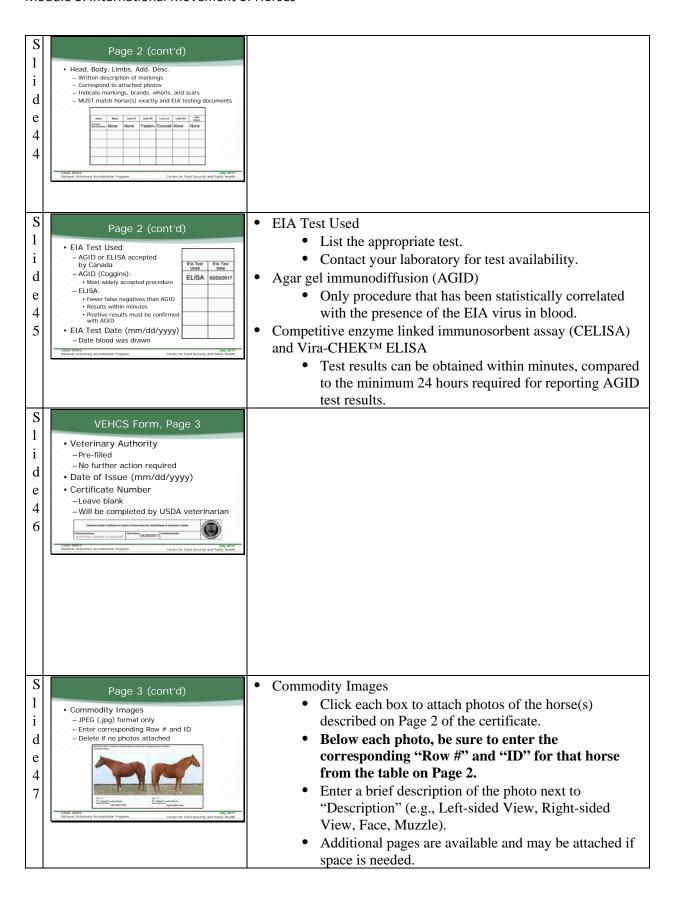
Brokers often handle arrangements for the airplane or ship and **Export Inspections** reservation at the port of embarkation Air or sea export i - Require final inspection by VS veterinarian at port of embarkation d - Timeline established by departure dates Land export e Require inspection by Canadian or Mexican 2 port veterinarian at border - Timeline established by travel or crossing date 8 S **Equine International** Results for the individual animal(s) being exported include the ealth Certificates (IHCs) following: Must be issued by Category II AV i • Laboratory tests; - Then endorsed by VS veterinarian Issuing AV must identify, record all results Vaccinations; d for animal(s) being exported Information on IHC is responsibility of issuing AV • Treatments: and e · Each AV involved must 2 • Isolation prior to shipment. be identified 9 · Work done by Category I As stated in 9 CFR §161.4, it is the responsibility of the AV to AV not accepted stay currently informed on Federal and State regulations "governing the movement of animals and on procedures applicable to disease control and eradication programs, including emergency programs." If more than one AV provides certification statements and/or performs tests or vaccinations, each AV involved must be identified, along with their location, on either the certificate or on a separate attached sheet to be submitted to the VS endorsing veterinarian. Any work provided by a Category I accredited veterinarian or a non-accredited veterinarian will not be accepted. • If you have any questions about certifying work that was done by another veterinarian, refer to 9 CFR §161.4(c)(2) or contact your NIES Service Center for instructions. S BLOCK letters: Simple capital letters composed of strokes of Equine IHCs uniform thickness · Official documents Animals may be held at the destination country's port of entry i · Must be completed accurately Typed, computer printed, or hand printed BLOCK letters with blue ink and be retested, refused entry, or confiscated and destroyed if d the certificate is inaccurate, incomplete, or expired. Some countries do not allow handwritten IHCs e Signed, endorsed, valid for 30 days Errors can result in unnecessary delays and additional 3 - Some countries have shorter valid time period • Errors, incomplete certificates can result in expenses for your clients. 0 serious consequences

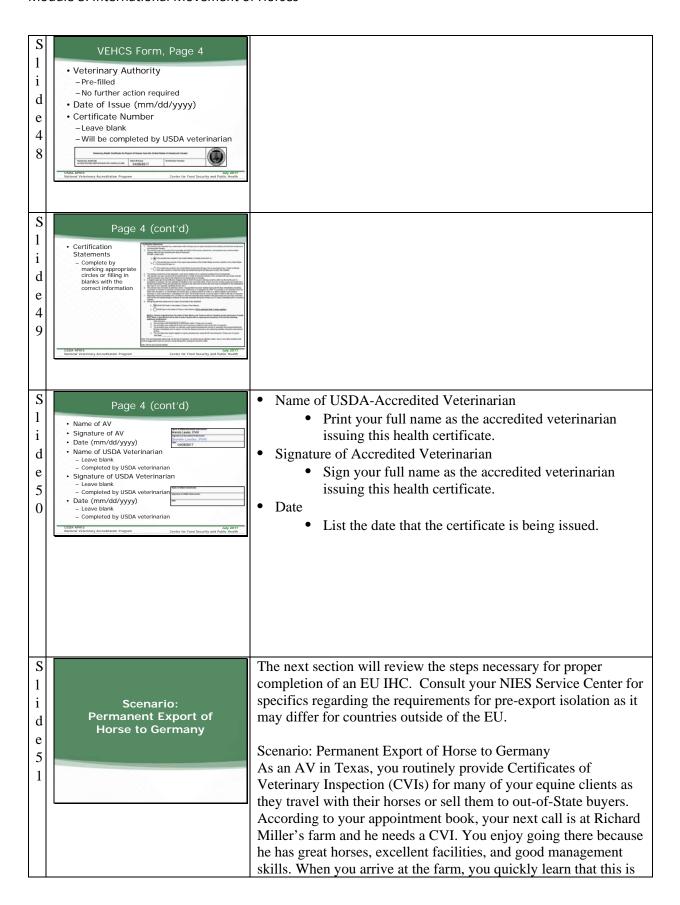


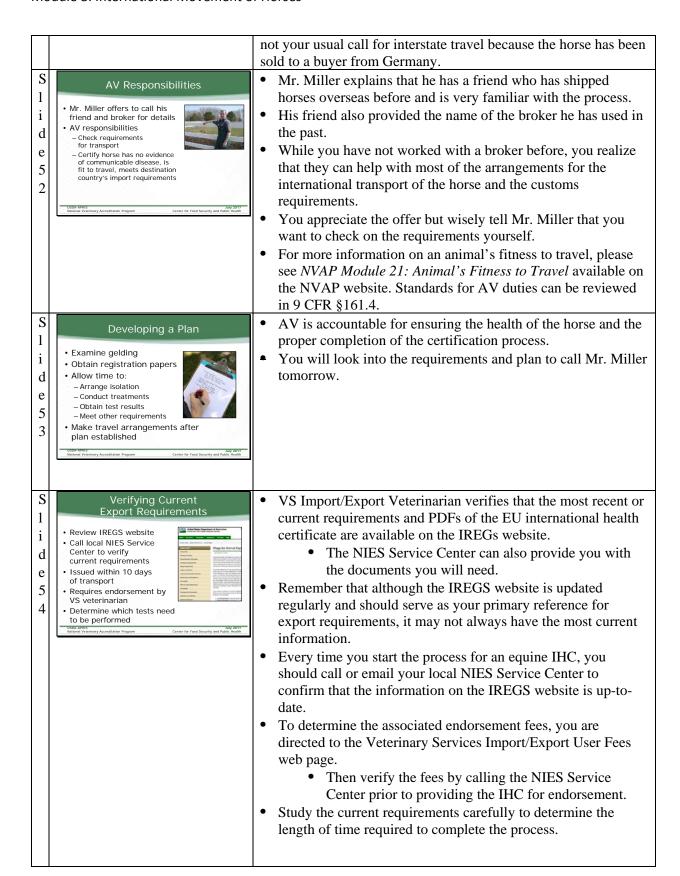


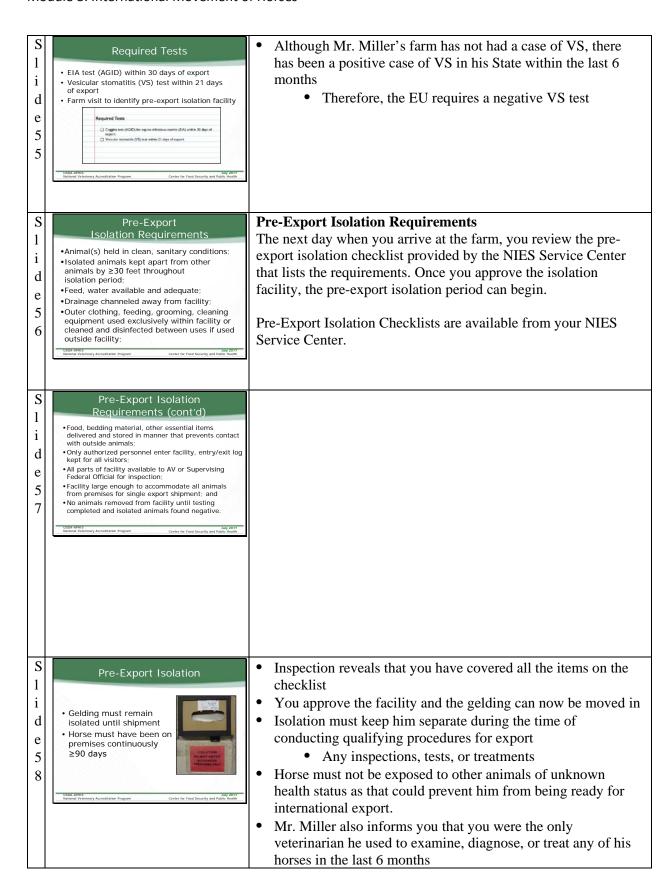


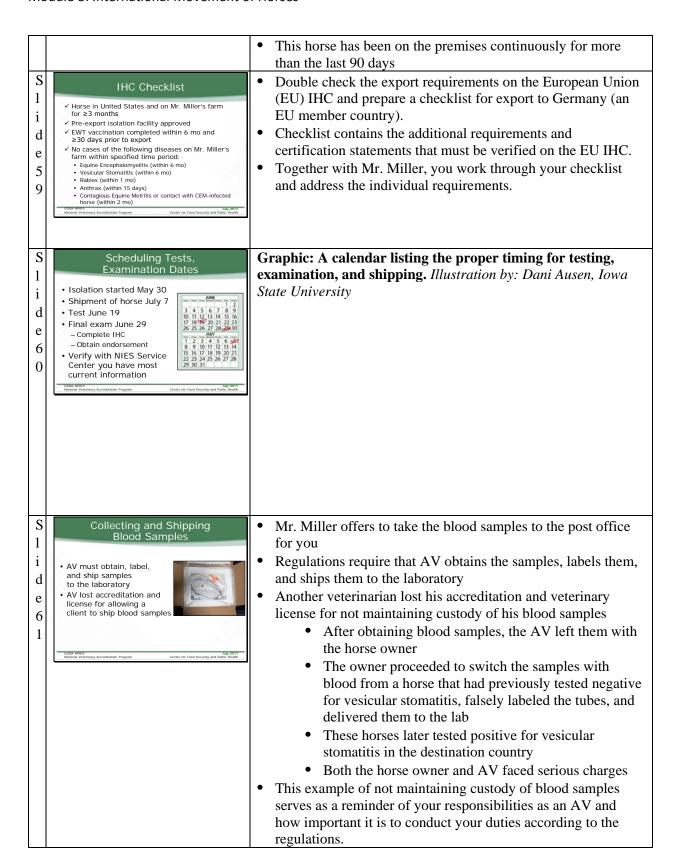


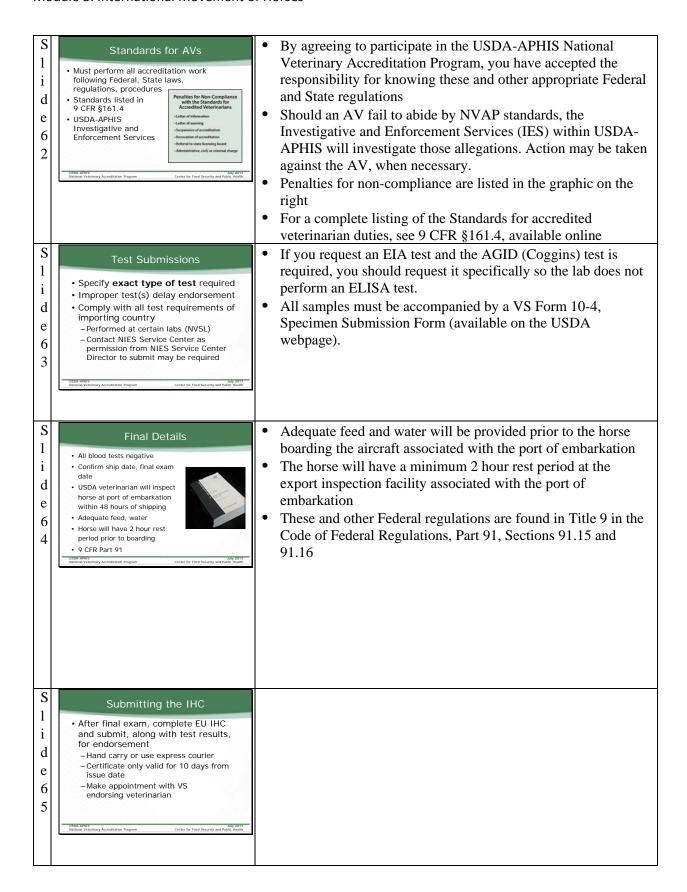


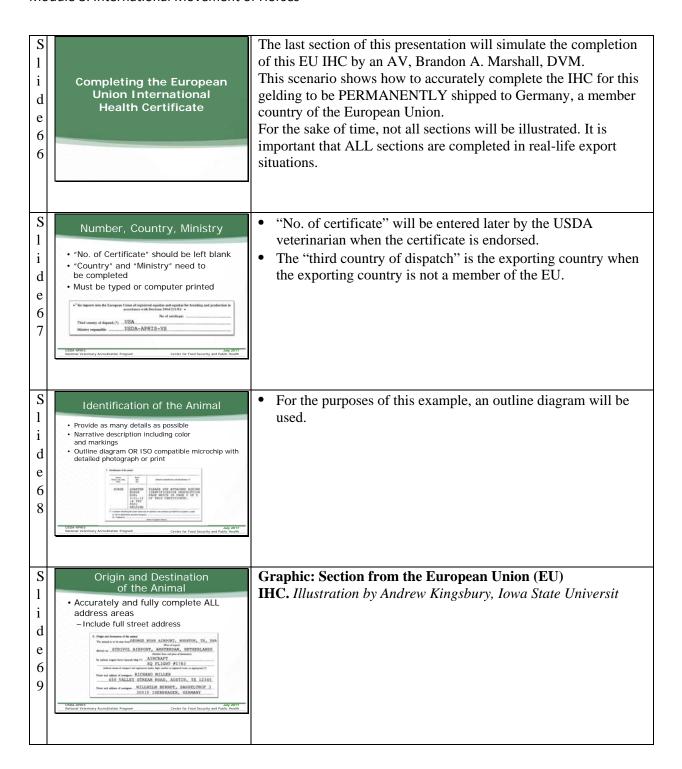


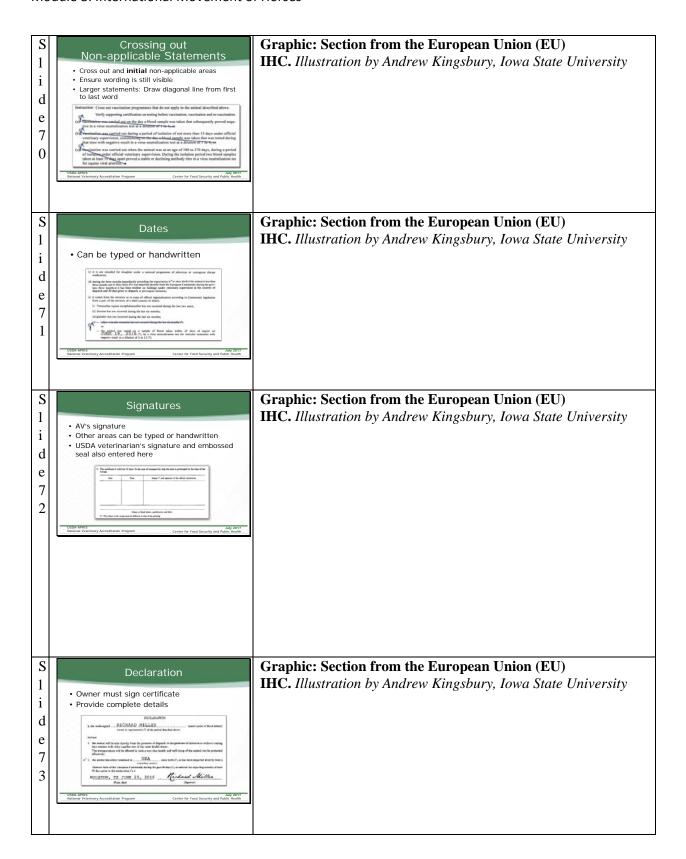


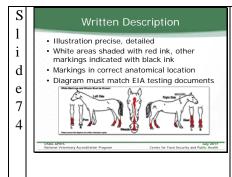












- Most countries accept the use of blue ink for this portion of the certificate
 - For EU certificates, white areas should be completely shaded in with **red ink** and all other markings (whorl, brand, tattoos) should be indicated with black ink.

Graphic: Top section of the written description form that can be submitted with the European Union (EU) IHC. *Illustration* by Andrew Kingsbury, Iowa State University

Written Description Provide all required details about animal being exported Written description precise, detailed Description must match EIA testing documents World Types of the Sign of the Sig

Graphic: Bottom section of the written description form that can be submitted with the European Union (EU) IHC.

Illustration by Andrew Kingsbury, Iowa State University



Now that you have completed this presentation, you should be able to

- describe the economic importance of the U.S. equine industry;
- recognize that international travel of horses is the major contributing factor to the global spread of equine diseases;
- locate and correctly determine the requirements and procedures that must be completed to export U.S. horses;
- perform your roles and responsibilities as an AV;
- recognize that you are solely responsible for all aspects of the documents you sign regardless of who assists you in preparing them;
- recognize that only you or another AV may perform all of the testing, identification, and immunizations which may be required for horses to travel; and
- be able to fully and properly perform all facets of the export process.

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Supplemental Training

- This informational presentation has been approved expressly to serve as one unit of supplemental training for participants in USDA's NVAP
- Please ensure you complete, sign, and retain a certificate stating that you attended this presentation
- Contact your NVAP Coordinator for more details

USDA-APHIS July 2017

Presenters: Make sure your audience members know about obtaining credit for their attendance. This informational presentation has been approved expressly to serve as one unit of supplemental training for participants in USDA's National Veterinary Accreditation Program. Please ensure you complete, sign, and retain a certificate stating that you attended this presentation. Contact your NVAP Coordinator for more details on renewing your accreditation.

