PROCEEDINGS

ONE HUNDRED AND FIRST
ANNUAL MEETING

of the

UNITED STATES ANIMAL
HEALTH ASSOCIATION

GALT HOUSE HOTEL
LOUISVILLE, KENTUCKY

October 18-24, 1997
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EVA GUIDELINES FOR BREEDING A MARE TO AN EQUINE ARTERITIS SHEDDING STALLION

Presented by Amy Mann, American Horse Council

A year ago, the American Horse Council (AHC) was asked to address the issue of Equine Viral Arteritis (EVA) because of its continuing economic impact on U.S. horse owners. The AHC established a working group to develop an industry-driven control program for EVA that would include a protocol for identifying and managing sources of equine arteritis virus (EAV) infection by way of carrier stallions or virus infective semen.

Representatives of the following breed organizations were appointed to the AHC working group on EVA: the American Quarter Horse Association; the U.S. Trotting Association; the Tennessee Walking Horse Breeders & Exhibitors Association; the International Arabian Horse Association; the Appaloosa Horse Club; the Federation of North American Sport Horse Registries; and the Jockey Club. In addition, the group included Dr. Ralph Knowles from the Maryland Department of Agriculture, Chairman of the U.S. Animal Health Association's Committee on Infectious Diseases of Horses; Dr. Don Lein, Director of the Veterinary Diagnostic Laboratory at Cornell University, and Dr. Don L. Notter, Kentucky State Veterinarian. The goal of the working group has been to develop a voluntary, industry-driven protocol that will assist stallion owners in preventing establishment of the carrier state in stallions and minimize the risk of EVA-related abortion in mares and which will also serve to limit the liability associated with the use of stallions which shed equine arteritis virus or infective semen. The protocol will also serve as a basis for establishing controls over the importation of EAV carrier stallions and infective semen.

EVA is a contagious viral disease of members of the horse family that is...
primarily spread by direct contact with horses acutely infected with equine arteritis virus. While it is considered a respiratory infection of the horse, the disease can also be spread through breeding a carrier stallion to a susceptible mare. The relative increase in the number of confirmed outbreaks of EVA in horses in the U.S. in recent years has begun to concern horse owners, notwithstanding the fact that from the medical perspective, EVA is not regarded as a disease of major significance. Horse owners need to be provided with a protocol that will help to ensure protection of their horses from EVA and prevent problems that could result from the use of carrier stallions or infective semen. Other matters that need to be addressed include the liability of owners whose stallions shed EAV and the problems associated with the movement of carrier stallions or virus positive semen at the national and international level.

Enclosed you will find a copy of a protocol developed by the working group to help horse owners identify carrier stallions and EAV infective semen so that either the former or the latter may be used without attendant risk of the occurrence of EVA. Adoption of the protocol would greatly lessen the likelihood that the disease would be driven underground; which, were it to occur, would greatly hinder horse owners being able to protect their horses effectively against this disease.

Because of the potential economic threat posed by EVA, it is highly advisable that breed registries recommend that the enclosed protocol be adopted by breeders as part of good breeding practice. The protocol provides a practical, realistic and unified approach that permits the continued use of carrier stallions or infective semen. Some breed registries have already taken such an initiative. The North American Department of the Warmblood Studbook of the Netherlands instituted a requirement last year that in order for foals to be eligible for registration each stallion must be tested for EVA and the results published in the annual directory. Owners are provided with a protocol that allows for the continued use of carrier stallions and effectively protects mares against the disease. Although the protocol was initially implemented on a voluntary basis, membership response for the initiative was so favorable that it is now a mandatory program. As an additional protection, the Registry requires frozen semen imported into the U.S. for resale in this country be tested for EAV at the Gluck Equine Research Center, University of Kentucky.

If you have questions regarding the protocol please contact us at 202-296-4031

**PROTOCOL MARES TO AN EQUINE ARTERITIS SHEDDING STALLION**

At least 30 days prior to breeding, the mare should be tested for serum neutralizing antibodies to equine arteritis virus. A blood sample should be submitted to a veterinary medical diagnostic laboratory approved by the USDA to conduct this serological test. Based on that result the following procedures
are recommended.

**ANTIBODY NEGATIVE (titer of less than 1:4) – NON-PREGNANT MARES**

If the mare is found to be serologically negative, she should be vaccinated as soon as possible with the licensed modified live virus vaccine against EVA. After vaccination, the mare should be isolated for 21 days to allow her time to develop adequate protective immunity against subsequent exposure to the virus and to prevent the minimal risk of spread of the vaccine virus to any susceptible horses with which she might come into contact.

Twenty-one days following vaccination, the mare may be bred to a shedding stallion. She should not be bred to a shedding stallion during that period.

After being bred for the first time to a shedding stallion, the mare should be isolated for 21 days from any horses on the premises serologically negative for antibodies to the virus. Subsequent breedings do not require an additional period of isolation.

Occasionally a mare may be vaccinated against EVA, but for some reason, is not bred that year to a shedding stallion. If this should happen, the mare should be vaccinated again before being bred to a shedding stallion. No isolation is necessary following re-vaccination.

**ANTIBODY NEGATIVE (titer of less than 1:4) – PREGNANT MARES**

The current licensed modified live virus vaccine against equine viral arteritis is not approved for use in pregnant mares. While a mare that is in good health may be vaccinated following parturition, a mare that has had a complicated foaling or is otherwise not in good health, should not be vaccinated until she has regained her health. The foal should also be in good health and be at least two weeks old before its dam is vaccinated.

There is minimal risk that suckling foals out of serologically negative mares may be exposed to the vaccine virus when the mare is vaccinated against EVA.

**RE-VACCINATION**

Mares that will be bred to shedding stallions should receive an annual booster vaccination against EVA 21 days prior to being used for breeding purposes. No isolation is necessary following re-vaccination.

**ANTIBODY POSITIVE (titer of 1:4 or greater) - ALL MARES**

Mares that test serologically positive for antibodies to equine arteritis virus can be bred to a shedding stallion without the need for prior vaccination against EVA. Antibody positive mares that are bred to a shedding stallion by natural cover should be kept separate from other susceptible horses for 24 hours to avoid possible mechanical transmission of virus from voided semen. Any vehicle used to transport such mares immediately following breeding to
a shedding stallion should be thoroughly cleaned and disinfected prior to transport of susceptible horses.

PROTOCOL FOR BREEDING STALLIONS

Prior to the breeding season (at least 60 days is recommended), the stallion should be blood tested for neutralizing antibodies to equine arteritis virus.

**ANTIBODY NEGATIVE -- (titer of less than 1:4)**

If serologically negative, the stallion should be vaccinated with a licensed modified live vaccine against EVA (ARVAC®, Ft. Dodge Laboratories, Ft. Dodge, Iowa) and isolated for 30 days after vaccination. An annual booster vaccination against EVA should be given on a regular basis every 12 months but no sooner than thirty days prior to being used for breeding.

**ANTIBODY POSITIVE -- (titer of 1:4 or greater)**

If the stallion is found serologically positive for serum neutralizing antibodies to equine arteritis virus, without written evidence certifying his negative serological status prior to vaccination, he needs to be tested for presence of the carrier (shedding) state. This can be determined by either one of the following methods:

- attempted isolation of equine arteritis virus from two separate ejaculates collected and submitted by an accredited veterinarian to a laboratory approved by the USDA to conduct this test;

**OR**

- test breeding the stallion to two mares serologically negative for antibodies to equine arteritis virus at least twice on each of two consecutive days (four covers) and the mares checked for the development of serum antibodies to the virus 28 days after breeding.

**ANTIBODY POSITION -- NON-SHEDDING STALLIONS**

Serologically positive stallions with written certification of negative antibody status prior to vaccination against EVA by a USDA approved laboratory need not be tested for virus shedding.

Stallions serologically positive for antibodies to equine arteritis virus from natural exposure that have previously been tested and found to be non-shedders (non-carriers) of the virus should have written confirmation of their non-sh edder status and receive an annual booster vaccination against EVA.

**ANTIBODY POSITIVE -- SHEDDING STALLIONS**

Shedding stallions can be used for commercial breeding provided they are managed in accordance with the above guidelines. Stallion owners and stallion managers should disclose the shedding status of their stallions to mare owners, breed associations and, where required, to state authorities.
Shedding stallions can be safely bred to adequately immunized mares or to mares that have tested serologically positive for neutralizing antibodies to equine arteritis virus.

Occasionally, shedding stallions will spontaneously stop shedding equine arteritis virus. Owners may wish to retest the semen of shedding stallions from time to time to determine if the stallion is still shedding virus.

OTHER RECOMMENDATIONS

**Teaser Stallions**

Teaser stallions should be vaccinated against EVA on an annual basis in accordance with this protocol.

**Identification of Carrier (Shedding) Stallions**

It is recommended that breed associations publicly disclose the names of these stallions registered with their breed association that are confirmed shedders of equine arteritis virus.

**Prevention of the Carrier State**

Breeding stallions that are found serologically negative for antibodies to equine arteritis virus should be vaccinated against EVA to prevent development of the carrier state.

In order to prevent the carrier (shedding) state, especially in those breeds in which the infection is widely prevalent, as well as to prevent equine arteritis virus infection, colts under 270 days of age that are serologically negative for antibodies to equine arteritis virus should be vaccinated against EVA. Written certification of their negative serological status to equine arteritis virus should be obtained before vaccination.

**USE OF MODIFIED LIVE VACCINE AGAINST EVA**

It is essential to have written official certification of a horse’s negative serological status to equine arteritis virus prior to initial vaccination (ARVAC®, Ft. Dodge Laboratories, Ft. Dodge, Iowa) against this disease.

Stallions and mares that will be bred to shedding stallions should receive an annual booster vaccination against equine arteritis virus prior to being used for breeding purposes.

UNITED STATES ANIMAL HEALTH ASSOCIATION - 1997
RESOLUTION #
SOURCE: Committee on Infectious Diseases of Horses
SUBJECT: Equine Arteritis Virus
DATES: Louisville, Kentucky, October 18-24, 1997
BACKGROUND INFORMATION:

At the request of the USAHA Infectious Diseases of Horses Committee
and following extensive consultation with and input from all major national horse organizations and breed registries, state horse councils, and the American Association of Equine Practitioners; the American Horse Council established a working group to evaluate and recommend solutions to the spread of equine viral arteritis (EVA) through infective semen.

Having reviewed various options to address this problem, the working group has opted to endorse a voluntary, industry-driven program of identification and classification of equine arteritis carrier stallions and infective semen.

Increasingly, outbreaks of EVA in the U.S. have been linked to either imported equine arteritis virus shedding stallions (“shedder stallions”) or imported infective semen. Knowledge of the true EVA status of a stallion or his semen at the time of importation would unquestionably help in the effort to reduce clinical occurrence of EVA in the US and prevent economic losses to the horse breeding industry.

Currently, the U.S. is the only major horse breeding/racing country that does not have any import requirements for equine arteritis virus. The working group determined that while the current policy is unacceptable, there is no justification - scientific or economic - for prohibiting the importation of carrier stallions or infective semen.

A draft protocol, developed by the EVA working group, was presented and discussed at all four regional meetings of the USAHA earlier this year.

Accordingly, the American Horse Council now requests the assistance of the USAHA in launching this non-mandated program.

RESOLUTION:

The USAHA strongly urges action by APHIS/USDA in working with the industry and the states on the establishment and implementation of requirements for equine arteritis virus testing and classification of stallions and semen presented for entry into the United States.

INFECTIOUS DISEASES OF EQUINE COMMITTEE ELECTRONIC PASSPORT SUBCOMMITTEE MEETING REPORT.

Presented by Steve Halstead, co-chair

The subcommittee met in Columbus, Ohio, April 1, 1996 at the annual LCI meeting.

Committee members in attendance included Dr. Ernie Zirkle, Chair, New Jersey Department of Agriculture; Dr. Steve Halstead, Co-Chair, Michigan Department of Agriculture; Dr. Tim Cordes, USDA-APHIS; Dr. Jeffrey Huse, New York Department of Agriculture; Mr. Jay Levenstein, Florida Department of Agriculture; Ms. Amy Mann, American Horse Council; Dr. Donald Notter, Kentucky Department of Agriculture; Dr. Roger Olson, Maryland Department of Agriculture; Dr. Frank Rogers, Mississippi Board of Animal Health.

This committee met in conjunction with the 1997 Livestock Conservation