Was there EVA at Oakhurst?

In summer of 2005 there was an outbreak of EVA at Oakhurst. By the time all diagnostic tests were completed the disease had run its course and there were no longer any affected horses on the farm. Since then we have had no EVA problems whatsoever!

We believe that the virus arrived here via shipped cooled or frozen semen in mid to late July '05. During this period several mares were bred here using A.I. with shipped or frozen semen. Efforts to determine exactly where the virus came from were unsuccessful.

Fortunately our Thoroughbred breeding season had ended well before the EVA outbreak, thus there were just a few client horses remaining on the premises. The A.I. mares that were bred here during that time experienced normal fertility and no EVA abortions occurred in them. This is because EVA does not cause abortion unless the mare contracts it after her second month of pregnancy.

We did blood tests on all horses that were on the farm and found that the horses kept outside of the main barn were not affected. All of our horses are now vaccinated. New horses are vaccinated upon arrival. If an infected horse or semen from a shedder stallion comes again, we won't have any susceptible horses that could pass the virus around.

We also did extensive testing on many other horses that had been here to determine if the virus had ever left our farm. Fortunately all were seronegative. We tested all stallions that had been here for semen collection and only one of them, a horse that had previously been imported from Europe, was found to be seropositive and he fortunately was proven to be a non-shedder. **After extensive follow-up we are quite confident that no acutely infected horse left here and exposed other horses after leaving Oakhurst.**

We have learned much about the control and management of EVA. Our 2006, 2007, and 2008 breeding seasons went off without a hitch. There has been no evidence whatsoever of any further EVA infection at Oakhurst.

EVA is a very manageable problem. We strongly encourage all mare and stallion owners to get their horses tested/vaccinated before breeding. Talk to us about this!

With respect to EVA, Oakhurst is now likely to be one of the safest places for your breeding work because of our knowledge, experience and vigilance, and the management procedures we have implemented.

Vaccination = Protection!

There is a safe and highly effective vaccine that can be used to prevent EVA. Protective immunity is attainable with just a single dose of the vaccine and a single vaccination may even confer lifelong immunity in most horses. The vaccine is manufactured by Fort Dodge Laboratories and is sold under the brand name, **Arvac**.

Should I consider vaccinating my horse(s) for EVA?

Most certainly! An appropriate vaccine program can virtually eliminate all EVA worries. Here are our recommendations:

Any mare that is going to be bred to an EVA shedder stallion should ideally be vaccinated at least three weeks prior to breeding.

Because of the increasing prevalence of the disease we recommend that all susceptible (seronegative or unvaccinated) mares be vaccinated prior to breeding to prevent abortion in case they are exposed to EVA during their pregnancy.

We strongly recommend that all potential breeding stallions be vaccinated but only after they have first been proven to be serologically negative or are under 9 to 10 months of age. Many experts recommend annual boosters for stallions.

It may also be advisable to vaccinate other horses if they are likely to be exposed to the virus. However, some countries will not permit the import of horses that are serologically positive for EVA, even though these individuals (other than carrier/shedder stallions) cannot pass the virus to other horses. Thus, if an export market is to ever be considered, you may not want to vaccinate. However, consult your veterinarian first.

The formerly recommended three-week isolation period following vaccination is no longer believed necessary.

What about vaccinating pregnant mares?

The vaccine is now approved for use in pregnant mares prior to the last two months of pregnancy. However, if a significant risk of exposure to EVA is suspected the vaccine is probably far less risky than exposure to the disease.

Always consult with a veterinarian before vaccinating for EVA!

Equine Viral Arteritis

"It seems that we have been hearing more and more about EVA. Should I be concerned?"

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Symptoms of EVA

Interestingly, the majority of horses infected with the Equine Arteritis Virus will never develop any symptoms (clinical signs) at all! Others may exhibit varying degrees of a mild to more severe flu-like illness that could include one to most of the following symptoms:

- **Fever**
- **Swelling of the Limbs**
- **Lack of Appetite**
- **Depression**
- **Swollen Runny Eyes**
- **Nasal Discharge**
- **Cough**
- **Skin Rash**
- **Swelling of the Mammary Glands**
- **Swelling Around the Prepuce or Scrotum in Males**
- **Neonatal Foals may get Viral Pneumonia**
- **Abortion in Pregnant Mares (only if more than two months pregnant at time of exposure)**

Complete Recovery Takes Only Two to Three Weeks. Horses with EVA invariably make complete recoveries, even without any medical treatment, generally within two to three weeks. The disease is rarely fatal except in some cases involving extremely immuno-compromised or debilitated horses, or very young foals.

Lifelong Immunity Usually Occurs. Virtually all horses that have been infected with the EVA virus become immune to EVA infection for the rest of their lives. Mares that have aborted due to EVA will never again have another EVA abortion.

Two main reasons we are concerned with EVA:

1. **EVA can cause abortions**
2. **A significant percentage of affected mature stallions can become long-term shedders of the virus in their semen and could pass the virus on to susceptible mares, and then them to others horses.**

Understanding Equine Viral Arteritis

What is Equine Viral Arteritis?

EVA is a contagious disease of horses and other closely related equids that is caused by a simple RNA virus called the *Equine Arteritis Virus*. The majority of horses infected with the virus will develop no or only minor and often unnoticed symptoms. Others may experience a mild to more severe flu-like illness that resolves quickly. (See Side-Bar to Left.)

How is EVA transmitted?

The virus is spread from acutely infected horses to susceptible horses primarily **by the respiratory route**, just as the flu or a human cold is spread. Outbreaks can occur at racetracks, horse shows, sales, or any other place where horses are gathered. Another way that the virus spreads is **venereally through infected semen from carrier/shedder stallions** that are bred to susceptible mares. A mare infected by breeding can then pass the virus to others. The virus survives in cooled and frozen semen. Fortunately, these carrier/shedder stallions will not spread the virus by any other route. The virus affects only horses and other equid species, never people or other animals.

Is this a new disease?

No. EVA was first identified as a specific disease over 50 years ago and probably affected horses in many countries of the world for a long time before that. In the USA the disease has been particularly prevalent in the Standardbred breed for many years. The recent increase of AI within most breeds along with the frequent shipment of semen from throughout the world, has enabled EVA to spread throughout the USA to many breeds. The big 2005 and 2006 outbreaks in Quarter Horses in Utah and New Mexico has increased awareness among horse owners nationwide.

How can I determine if my horse has been infected with the EVA virus?

Because the symptoms of EVA are quite similar to those of other respiratory viruses, a blood test for circulating antibodies is necessary to prove if or not your horse has been exposed to the EVA virus. When antibodies are present in a horses blood it is said to be seropositive and the horse is probably permanently immune to further infection with the equine arteritis virus. If no antibodies are found in the blood the animal is said to be seronegative and it would be susceptible to infection if exposed to the arteritis virus.

What about "carrier" horses?

Only stallions can become carriers of the virus. The virus will survive only in the accessory sex glands, that produce the seminal fluid, in these carrier stallions. Many of the stallions that contract EVA will quickly clear the virus and will subsequently never shed the virus in their semen. Any stallion that tests seronegative is not a shedder, and subsequently if vaccinated will never run the risk of becoming a carrier. The carrier/shedder status of a seropositive stallion is determined by viral culture of the semen.

Is it safe to breed to a carrier stallion?

It is perfectly safe to breed to a carrier/shedder stallion if just a few simple management practices are used. Ideally, susceptible (seronegative mares) should be vaccinated against EVA three weeks or more before the intended breeding. After the first breeding to a carrier/shedder stallion the mare should be isolated from any susceptible horses for three weeks. With these simple precautions EVA is a very manageable disease and should not cause further problems or concern.

But won't breeding to a carrier stallion cause a mare to abort or to not get pregnant at all?

NO! In fact, even if a seronegative susceptible mare is bred to a carrier/shedder stallion, one can expect normal fertility and pregnancy rates. Though such a mare is likely to become infected from the breeding she will become free of and immune to the virus before it could have any effect on her pregnancy.

Is it possible to cure a carrier stallion?

Many carrier stallions will eventually clear the virus from their systems on their own and will never again shed or pass the virus in their semen. This process may take many weeks, months, or in some cases years. While there may someday be a cure, to date a reliable treatment for eliminating the carrier/shedder state has not been developed.

How can one know if they are breeding to a carrier/shedder stallion?

Conscientious stallion owners should have their stallions tested and vaccinated. If so they will be happy to provide substantiating documentation to you. Many breeding centers won't accept semen with unknown EVA status.