

AFRICAN HORSESICKNESS INFORMATION

There is a lot we do know and much we don't know about AHS.

Please note these are my personal observations, opinions and advice. There may be others out there who don't fully agree with everything I say but I do believe all aspects discussed here are founded on good science and experience.

WHAT WE DO KNOW

- We know AHS is a virus. Genus: Orbi virus.
We know that there at least 9 strains of this virus
- We know AHS is transmitted by at least two species of Culicoides Midges.
The most common and best documented species is Culicoides Imicola.
There are many species of Culicoides.
- We know these midges are mostly active at night (periods of low light intensity) but can be active on very dark cloudy days as well. Note; not exclusively at night.
- We know that if we can prevent the midges from biting affected horses we can control the disease.
- We know the "bloom" (CO2, sweat, smell, methane etc) of the horse helps the midges locate a horse.
- We know the midges also feed on other animals such as cattle and sheep and may have a preference for some of these species over equines.

WE HAVE A VACCINE:

- But we know the vaccine is not 100% effective and needs a number of vaccinations before a good level of immunity is established.
- We know we have 7 strains of the 9 known strains of AHS in the vaccine.
Bottle 1: Serotypes 1, 3 and 4.
Bottle 2: Serotypes 2,6.7 and 8.
Serotypes 5 and 9(are not included but there is cross protection from some of those included).
- We know that vaccinated animals have a far greater survival rate than unvaccinated animals. If it wasn't for the vaccine many thousands more horses would die annually. This is borne out by historic records. The number of horses that died of AHS in the Anglo Boer was perhaps as many as 100 000 (300 000 British horses died of various causes).

Horrific considering the total South African population of horses is around 330 000.

NEW VACCINE

A preliminary recombinant canary pox virus vectored vaccine (ALVAC) has been developed. This vaccine contains only Serotype 4 at present. Other serotypes are being worked on.

This vaccine produces a significant level of Cell Mediated Immunity(CMI), that is it causes the production of cells that engulf foreign bodies(such as viruses) rather than just anti bodies which identify, bind and neutralize specific foreign objects.

We hope that in the next few years this vaccine will be successful and commercially available.

- We know the incubation period of the disease in the horse is 5 to 22 days.

- We know that vaccinated animals can become infected and show mild symptoms or no symptoms but can still play a role in transmitting the virus.
- We know that many of the advocated repellants don't actually work.
- We know we have no specific treatment that is effective to cure the disease.
- We know that once introduced into a Zebra herd, the Zebras can act as a reservoir of infection for that season. The virus can circulate within that Zebra population.
- We know Zebras do not show symptoms of the disease. We know Donkeys and mules are much more resistant than horses to the disease. Donkeys and Mules can probably play a similar role as Zebras in the transmission of the disease.
- We know there are many times more donkeys than horses in South Africa.
- We know that moving infected horses around can play a significant role in introducing the disease in to previously non infected areas.
- We know that sleeping a horse in an infected area for just one night can be sufficient for it to get infected. The more nights a horse spends at a AHS active venue the greater the risk of contracting and then spreading the disease.
- We know that competition horses such as endurance horses and competition horses of all types are under stress and as such their immune systems can be compromised.
- We know that many horse owners don't vaccinate their horses. About half the equine population in RSA is unvaccinated.
- We know that some people continue to move their horses around and go to competitions even if they have active AHS on their properties.
- We know that some organisers of competitions continue to hold events even with active AHS on their properties.
- We know that by limiting the movement of horses we can limit the spread of the disease.
- We know that February, March, April are the months that we usually get the greatest numbers of cases.
- We know that some years are much worse than others and this appears to be dependent on environmental factors – moist warm summers. We know this coincides with large populations of midges.

TESTING

We now have serotype specific PCR testing available.

This test allows for a quick result within 24 hours.

This test is serotype specific.

Whole blood is a suitable sample for this test.

WHAT WE DON'T KNOW

We don't know how this virus over winters from one year to the next.

WHAT WE CAN DO

Vaccinate with a vaccine that is scientifically proven to be effective. At this stage the Ondestepoort vaccine is the only vaccine that meets these criteria.

Use insect repellants that work. Remember many of those commonly used are ineffective. DEET (the ingredient in Tabard) has been shown to be the most effective available at this stage.

Minimize the exposure of horses to the midges. Stable in midge proof, clean stables.

Use fans in the stables to disperse the “bloom” of the horse. Put horses on top of hills where they are usually in a breeze.

Run other livestock such as sheep and cattle with the horses.

Minimize the movement of horses in times of AHS.

Move horses away from areas of high midge populations – all wet areas.

WHAT WE CAN'T DO

Prevent the disease with 100% certainty.

Treat the disease with a known proven effective treatment.

Though there is no proven effective treatment, almost all equine vets agree on the supportive treatment that should be administered once a horse shows symptoms.

WHAT WE SHOULD BE CAREFUL OF

We know the frustrations and desperation of owners when horses are sick and dieing of this disease but we should be careful of:

Products that are sold to repel insects that don't work

Treatments that are ineffective but cost a lot of money.

Treatments that are ineffective but harmful to your horse.

Some of the sellers of these products are well meaning and some are simply charlatans making a fast buck out of people's desperation.

KNOWING THE ABOVE

We should recommend:

To limit the movement of horses at high risk times of the year.

That means the number of equine events at high risk times of the year where horses from different areas come together for more than one day should be kept to a minimum or preferably not held at all at the high risk times.

If such events are scheduled then the organisers should be prepared to postpone the event in the face of an outbreak of the disease.

If an event is to be held, only known vaccinated horses should be allowed to attend. But keep in mind these vaccinated horses could still play a role in dispersing the disease.

Insect repellants that are known to work should be compulsory at such events.

We should vaccinate all horses with the Ondestepoort vaccine.

We should consider the things that we can do and use as many of these strategies as possible to try and prevent the disease.

LIABILITY

It is in fact a criminal offense to knowingly distribute this disease.

Should anybody knowingly spread this disease and irresponsibly infect others horses they could, and probably should, in due course be held liable for losses both financial and emotional occurred by the affected party.

As DNA sequencing improves the traceability and specific origin of viruses becomes more possible. Thus the proof of the above situation becomes more possible.

I will not be surprised if soon we don't see some huge liability suits brought against irresponsible parties who have negligently distributed this disease to other parties. The liable parties would likely include the owner of the horses that actually transported the virus, the organisers of the events from which the virus originated and the veterinarians who by their mere presence at an event are the responsible party. Please think long and hard about this my esteemed colleagues out there before agreeing to officiate at an event where there is a known presence or history of this dreaded disease at a time of the year where transmission is possible.

All horse owners and equine bodies should consider all of the above seriously in the best interests of the greater horse population.

Surely the moving of events to safer times of the year and/or the postponing of events is preferable to seeing 100's of horses dieing in agony almost on an annual basis.

In my opinion it is totally irresponsible to hold or attend any event where horses sleep over at the high risk time of the year and at a venue in a high risk area.

Here I unashamedly point out that the Horse of the Year Show, The Arabian Nationals, some Quarter Horse shows, many endurance and many Three Day Events are held at the worst possible time of the year in areas that are historically very high risk areas.

I think every effort should be made to persuade the organisers involved to move these events to a safer time of the year.

MAY WE TOGETHER REDUCE THIS AWFUL DISEASE.

WE CAN.

HELPLESSLY WATCHING A CHILD CRYING OVER HER BELOVED PONY DIEING IN AGONY IS A STRONG MOTIVATION TO STAND UP AND DO AND SAY THE RIGHT THING