

Topvac for Dairy Cattle

Topvac is a vaccine newly available in Canada labeled for reducing the severity of and incidence of post-partum mastitis in dairy cattle caused by *E. coli*, coliforms, *Staph aureus* and coagulase negative Staph. The vaccine has been available in Europe for many years and has now been brought over here.

Three doses are given at 45 days pre-calving, 10 days pre-calving and again at 52 days post-partum. When *E.coli* and coliforms invade the udder the vaccine attracts and activates the immune system so it can destroy the bacteria. When it comes to helping fight staph bacteria, the vaccine also prevents the development of Biofilm. Biofilm is an extracellular matrix produced by the bacteria once they invade the mammary gland. Its purpose is to protect the bacteria from antibiotics and the host's immune system and allow them to reproduce and spread and form more colonies within the gland. Topvac uses an inactivated *S. aureus* strain that produces a large amount of Biofilm to activate the immune system to produce antibodies that are specific to the Biofilm allowing the system to then fight the infection in the udder.

Studies done have shown a decrease in the number of cows experiencing severe clinical mastitis and was able to reduce the reproduction ratio of both *Staph aureus* and coagulase negative staphs to below 1. This means that using the vaccine will decrease the number of Staph positive cows in a herd over time. Another study also showed that vaccinated cows produced more milk in a lactation than unvaccinated cows. If you are interested in discussing whether this vaccine may be a helpful addition to your herd health program, feel free to call the office (905-982-1243) to speak with a veterinarian.

What's New at the Clinic?

We would like to wish Lauren and Brooke all the best as they both started university last month. We will miss having them around the office. A big thanks goes out to both of them for all of their hard work over the past few years!

We are holding our annual equine client education meeting entitled "The Fat Horse" on Tuesday, October 24 at Tara Hills Stud (13700 Mast Road) in Port Perry. Drs. Erin Branigan and Rachel Busato will be giving the seminar which features talks about Metabolic Conditions of Horses and Reproduction in the Mare. There will be a farm tour at 6:30 pm followed by the talks and some interactive demonstrations from 7:00 - 9:00 pm. Light refreshments will be provided. Everyone is welcome and we request that you RSVP by Friday, October 20 if possible.

For our dairy clients, we have a talk in the works for January about mastitis. We will provide more information in our next newsletter as well as on our Facebook page and website once we finalize the details. You should all plan to attend since there will be good food and good company (and you will hopefully learn something too!)

We have changed our office hours effective last month. Our new hours are as follows: Monday, Wednesday and Friday: 8:00 am - 6:00 pm. Tuesday and Thursday: 8:00 am - 5:00 pm.

Saturday: 8:00 am - 1:00 pm.

We would like to remind our clients that in accordance with the College of Veterinarians of Ontario (CVO) requirement that a valid veterinarian-client-patient relationship exists in order to dispense medications, a veterinarian needs to examine your animals/have a farm visit at least once annually. If you need any clarification on this matter, please do not hesitate to call the office and speak with one of our veterinarians or customer support staff.

West Nile Virus in Horses

With 17 confirmed cases of West Nile in horses in Ontario this year, 8 of which resulted in death of the animal, it's a good time to remind everyone of the importance of vaccinating against this potentially fatal disease.

West Nile Virus is a disease that is spread by mosquitoes that become infected when they feed on diseased birds. Birds are the only animals that act as carriers for the virus, as they alone have high enough levels of circulating virus to infect the mosquitoes. It is then passed on to horses as these infected mosquitoes feed from them. The warm summer months are therefore when West Nile Virus is of greatest concern, but with the increasing temperature later into the year, it would still be possible for horses to get infected into October, or as long as mosquitoes are still able to survive the weather.

The virus causes encephalitis, which is swelling of the brain and spinal cord. Many infected horses will not show any signs of disease and will clear the virus without any assistance. If they do show clinical signs, they can include a large number of non-specific symptoms. These include fever, decreased appetite and general lethargy as well as neurological signs including muscle twitching, ataxia (stumbling or in-coordination), and some can even progress to being down and unable to rise or develop seizures.

Unfortunately, there is no specific treatment, so horses can only be supported with fluids and anti-inflammatory medications while they clear the infection on their own. Horses that do not succumb to the disease can make a complete recovery or they may always show some residual neurological deficits.

There are ways to help prevent our horses from getting this disease, including some property management protocols to help decrease the number of mosquitoes on your property. The most important management strategy is to eliminate mosquito breeding grounds. This means getting rid of any unnecessary stagnant water. For standing water that is unavoidable (such as large water troughs for paddocks), ensure the water is changed frequently.

The best way, however, to ensure that your horse is protected from the West Nile Virus is to have your horse vaccinated against the virus yearly by your veterinarian. Contrary to some myths circulating in the horse industry, the West Nile Virus vaccine is shown to be safe and effective. For horses that have not received the vaccination before or are not up to date on their vaccinations, we recommend they get vaccinated with a West Nile Virus vaccine and then receive a booster 3-4 weeks later and then annually thereafter. The vaccination we administer to protect against West Nile Virus also protects against tetanus as well as 2 other neurologic diseases that are on the rise and show similar clinical signs to West Nile, Eastern Equine Encephalomyelitis (EEE), and Western Equine Encephalomyelitis (WEE).