THE 'WEST' PEST PROBLEM

GOLF COURSES AND WEST NILE VIRUS IN CANADA

We live in an age where travel and communication are easily achieved in a timely fashion. However, our global trotting has provided the route by which diseases such as West Nile virus and SARs are transported to parts of the world where they were not previously established.

Perhaps the good news is that the media quickly report and the numbers of confirmed human cases and fatalities. The West Nile virus was probably introduced to North America by bird-to-bird interaction or by mosquitoes when they migrate south for the winter. Consequently, West Nile virus will be maintained within our bird population. The West Nile virus is spread by mosquitoes and ticks.

The West Nile virus is spread by mosquitoes and ticks. The West Nile virus can be transmitted, at least with certain mosquito species, from infected female to its eggs (transovarial transmission). This means that when a mosquito develops from the egg to eventually emerge as a biting adult it already has the disease in its system and can transmit it to humans when they are bitten by infected mosquitoes.

The disease was probably introduced into Canada in 2000 and basically built up in the mosquito populations by transovarial transmission through 6 or more generations over two years. A spillover occurred in 2002 when human and horse cases were noted in several provinces. As time goes on, the disease will likely become increasingly prevalent in the mosquito population and the incidence of human cases could expand.

A CANADIAN EPIDEMIC?

Many animals, including man and horses, are at risk. During the summer and early fall of 2002 testing for West Nile virus in birds, mosquitoes, humans and horses indicated that the virus occurs throughout Ontario, including the eastern and northern regions, as well as in Quebec, Nova Scotia, Manitoba and Saskatchewan. We expect that the disease will be confirmed in the remaining provinces except Newfoundland in 2003. Newfoundland does not have the appropriate species of mosquitoes.

The disease spread quickly once it was established. In the United States there were nearly 4000 confirmed human cases between 300 and 400 deaths. The impact of the disease directly on Canadians last year is still being evaluated. As of March, mosquitoes from the 2002 season were responsible for roughly 1000 human cases of West Nile virus and fatalities were counted to fourteen. However, the jury is still out and these numbers are being revised. Some experts are calling this situation an epidemic. In addition, it was confirmed that some of the bird species in South America that migrate to the southern U.S. now have West Nile virus. We speculate that the disease will continue to spread past to those species that migrate to Canada either by bird-to-bird interaction or by mosquitoes when they migrate south for the winter. Consequently, West Nile virus will be maintained within our bird population. The West Nile virus is spread by mosquitoes and ticks.

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Concerned about West Nile Virus? You should be.

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The final option is adult mosquito control. Many products exist on the market to combat or deter growth of mosquito populations. The brands recommended within this article are the recommendation of the author, and not necessarily those of Golf Business Canada. Consider developing an action plan now, as to what you should take well considered and appropriate measures.

If mosquitoes typically are a problem, consider trials, is now commercially available. It is only a matter of time before these pesky beasts are confirmed as a West Nile virus vector. The Tabaspid Trap, developed in Canada and demonstrated to capture large numbers of these biting flies over the past three seasons in trials, is now commercially available. Winter is almost at an end; spring and summer will come, and with them mosquitoes. Consider developing an action plan now, as to what you should take well considered and appropriate measures.

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Golf courses in general have standing water somewhere on their property. Mosquitoes lay their eggs on and around standing water areas that are commonly mosquito-breeding sites. Examples of breeding sites include ditches and drainage ditches, storm water retention ponds, even troughs, bird baths, abandoned tires, road side ditches, woodlands and marshes. What can golf course owners expect next year? It’s pretty certain that West Nile virus is becoming endemic and those that provide or enjoy outdoor activities in the spring, summer and fall must stay alert and minimize the risk of contracting West Nile virus.

There is no vaccine and therefore the logical approach to avoid contracting West Nile virus is the implementation of the principles of integrated pest management (IPM), the positive action multi-pronged approach involving both protection and reduction of the numbers of mosquitoes that interact with us without a negative impact on the environment.

The first step is personal protection. This includes the use of personal repellents such as Deet based sprays. Avoid adult mosquito resting sites during times of peak activity. Wear long sleeves and pants and light or white colored clothing. Do not handle dead or sick birds without protection.

The next step is larval mosquito control. Remove or drain artificial containers such as discarded tires that can hold water and become a breeding site. Prevent eggs from being laid with barriers such as screening on top of rain barrels. Larvicide with biological products, for example Aquabac® or Dimilin®, or use the Larvasonic® that involves ultrasonic technology to kill the mosquito wrigglers.

The final option is adult mosquito control that could involve using flytraps such as the mosQTRAC®, Black Fly Trap, thermal fogging or ultrasonic light-emitting applications. Kits are also available such as the Vectore®, that enable individuals to easily test mosquitoes to see if they are carrying West Nile virus.

WATCHING FOR SIGNS

When should golf owners act? The mosquito season commences in the April/May time frame. The first mosquito adults that appear in the early spring and may even be seen around old buildings and barns through the winter are known to be West Nile virus carriers. They are primarily bird feeders but will feed on mammals if birds are not readily available for the early evening meals. Don’t panic if you see one of these critters during the winter months because they are not likely to bite. Generally temperatures have to get up around 21°C for that activity. If you see these mosquitoes in late winter, be aware that you have possible West Nile virus mosquitoes in the vicinity. Keep an eye out for dead birds, especially crows and blue jays, on the property. These two bird species are highly susceptible to West Nile virus and infection usually results in their death. They are considered indicator species for the presence of West Nile virus. Depending on the location you may see dead crows or jays as early as May. Be observant; use the birds as indicators that you should take well considered and appropriate measures.

If mosquitoes typically are a problem, consider the integrated approach. No single activity will likely be sufficient and using several tools will do more to reduce the risk of your workers and clients encountering West Nile virus.

One other caution - it has been said about horse flies and deer flies. There are over 100 species in Ontario and they are capable of carrying a number of diseases. Some experts believe it is only a matter of time before these pesky beasts are confirmed as a West Nile virus vector. The Tabaspid Trap, developed in Canada and demonstrated to capture large numbers of these biting flies over the past three seasons in trials, is now commercially available. Winter is almost at an end; spring and summer will come, and with them mosquitoes. Consider developing an action plan now, as to what you should take well considered and appropriate measures.

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