

## **Bison and Sheep Should Never Mix**

*Malignant catarrhal fever can kill mature bison*

In the Ag. extension business reading is part of the job. At this desk it usually involves a dozen or so prairie farm weeklies, a few monthly livestock publications, a smattering of trade periodicals, some favorite web sites, and the latest news. It is an enjoyable necessity that helps us keep up with the ever-evolving technology and shifting trends in agriculture.

In a recent article in a Glacier Media publication, Alberta veterinarian Roy Lewis – a regular and timely contributor – wrote about how bison and sheep need to keep their distance. Really? How come?

Well, it turns out that sheep are often carriers of a nasty disease-causing herpes virus, herpesvirus-2 (OVHv-2) m, that causes malignant catarrhal fever (MCF) in bison. Although carriers, sheep themselves do not suffer any ill effects, but shed the virus through nasal and ocular secretions.

Although not common to North America, another type of the same virus causing MCF is also found in wildebeest. Closer to home, a herpes virus was recently discovered that causes malignant catarrhal fever in white-tailed deer.

It is likely there are other undiscovered members of the ruminant population with viruses that may or may not cause disease. Roy Clark tells us that the MCF family of diseases is seen in 33 different species.

Clinical signs of MCF in bison are a high fever, lethargy, and weakness, with ocular and nasal discharge, almost always leading to death, usually in a few days. Infected animals often develop a blue and/or ulcerated eye.

The MCF virus attacks the blood vessels in multiple organs so clinical signs can be quite variable. Death can occur quickly, sometimes preceded by a short period of depression, diarrhea, and loss of appetite, but often with no apparent symptoms at all.

Bison pick up MCF through direct contact with sheep or shared facilities, or the virus can become aerosolized (airborne) and travel with prevailing winds. Because of the potential for airborne distribution, prevention strategies need to be developed to eliminate potential risks.

If Bison and sheep are being raised in the same area then prevention strategies should take into account factors such as the proximity of species, what class of sheep they are (age), whether the bison are downwind or upwind and whether there are any “biofilters” (windbreaks, trees or brush) between the two species.

Ideally, about three kilometers between species is recommended to minimize risk although no studies have been done to indicate appropriate distances. Regardless, that sort of space requires a good neighbour approach to setting up any new ag venture that involves sheep or bison.



## Bison and Sheep Should Never Mix *continued*

One often recommended strategy to be considered at the initial stage of planning a new bison operation is to place internal fencing six to seven metres inside property lines while establishing a thick, fast-growing windbreak next to the perimeter.

MCF can occur at any time throughout the year, though it appears more prevalent during the winter months. Young lambs tend to contract the virus from their mothers shortly after birth and become the major shedders as they come of age (six to nine months), which is traditionally during the winter.

Other diseases such as BVD (bovine viral diarrhea), Johne's and Salmonellosis can be mistaken for MCF so all suspect cases should be confirmed with proper laboratory diagnostic tests. In live animals, PCR (polymerase chain reaction-testing for DNA) can be done with a blood sample while a carcass is confirmed by using PCR tests on the tissues.

Currently there is no MCF vaccine available as the virus has not been isolated. Due to the limited knowledge of the virus itself and the small size of the bison industry, along with previous failures in manufacturing a vaccine for the wildebeest, pharmaceutical companies have little interest in conducting further research.

With no effective treatment, isolation of animals is recommended although doing so may not influence the outbreak. When it comes time to market finished animals, the potential for contact with sheep in the sales barn should be considered before transporting bison.

In the final summation, it is all about good communication. Cooperation between sheep and bison producers can be achieved through considerate grazing rotations that ensure the maximum distance between species.

The same consideration can be applied when processing or transporting sheep in the vicinity of bison. All producers have a vested interest in the success of the livestock industry, recognizing that all sectors have a niche role to play in providing the consumer a variety of quality products.

## Coming Events

**Environmental Farm Plan:** Join us on Zoom to learn more about the Alberta Environmental Farm Plan (EFP) program, and why would you want to have an EFP for your farm. Workshop dates include: Oct 20th: 1:30-3:30pm, Nov 4th: 6:00-8:00pm, Nov 19th: 9:30-11:30am, Nov 30th: 2:00-4:00pm. Webinar dates include: Oct 27th: 2:00-2:30pm, Nov 10th: 10:00-10:30am, Nov 25th: 9:00-9:30am. To register, email [info@albertaEFP.com](mailto:info@albertaEFP.com) or call 587-200-2552.

**Working Well Virtual Workshop:** November 4th at 6:30 pm virtually through Zoom. This free workshop hosted by Clearwater County will give landowners information about drilling, maintaining, troubleshooting and monitoring private water wells. To register, please visit <https://bit.ly/3jg8pgg>.