

CEPTOR



Animal Health News

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Disease Alert: BSE Confirmed in Canada

Paul Innes, Veterinary Science, OMAF

BSE!!

A case of Bovine Spongiform Encephalopathy (BSE) has been confirmed in a mature beef cow from Alberta. The Canadian Food Inspection Agency (CFIA) is the lead agency, under the authority of the federal *Health of Animals Act*, for the detection, control and eradication of all foreign animal diseases, including BSE. The CFIA, in co-operation with provincial, industry and international partners, is continuing a comprehensive investigation into the incident. Ontario continues to be in daily contact with the CFIA to offer whatever assistance is required for disease control, traceback and eradication activities.

The cow confirmed positive for BSE was not displaying any neurologic signs, but was a "downer" sent for slaughter and was condemned for other reasons. Statistics from the European Union indicate the incidence of BSE is much higher in on-farm mortalities and non-ambulatory animals than in healthy slaughter cattle. OMAF is currently testing a proportion of the downer and condemned cattle being slaughtered at provincial abattoirs as part of Ontario's BSE surveillance program. More than 1000 samples have been tested since April 2002. All samples tested negative.

The only previous case of BSE in Canada was in 1993, in a cow imported from Great Britain. The current case is believed to be indigenous, although the exact origin of the animal and route of infection are not yet known. Most cases of BSE reported worldwide have been traced to contaminated feed made from rendered infected cattle. (Canada implemented a ruminant-to-ruminant feed ban in October 1997.) Vertical transmission from infected cows occurs in less than 10% of cases. ⁽¹⁾ BSE is not known to be spread by casual contact, semen or embryos. Spontaneous cases, though theoretically possible, have not been demonstrated. All BSE cases outside of the UK have been traced to imported animals or feed.

Ontario veterinarians should be alert for clinical signs consistent with BSE, and report any suspected cases to the CFIA. Animals with BSE may show a number of different symptoms including nervous or aggressive behavior, abnormal posture, lack of coordination or difficulty in rising from a lying position, decreased milk production, and weight loss despite an increased appetite. These symptoms may last for a period of two to six months before the animal dies.

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(continued from page 1)

The Animal Health Laboratory (AHL) at the University of Guelph provides immunohistochemistry testing for BSE. Please contact the AHL for details about sample submission, (519) 824-4120 ext 54502.

This disease incident has resulted in the closure of the US border to many bovine and ruminant products, and uncertainty within the ancillary processing industries, such as abattoirs and rendering facilities across the country. Veterinarians may expect questions and concerns from producers about feeding, culling, euthanasia, animal welfare and client stress.

For current information on BSE, refer to

Canadian Food Inspection Agency	www.inspection.gc.ca
Ontario Ministry of Agriculture and Food	www.gov.on.ca/omaf

For information on dealing with client stress, refer to the OMAF information sheet *Information and Resources Available for Farm Families Managing Financial Pressures* at www.gov.on.ca/OMAFRA/english/livestock/general/health_management/bse/facts/infores.htm or contact the Agricultural Information Contact Centre, 1-877-424-1300.

More information on Foreign Animal Disease (FAD) reporting can be found at www.inspection.gc.ca/english/anima/heasan/fad/privete.shtml

The CFIA contact number for reporting a suspected FAD is 1-877-814-2342.

1. *Technical Consultation on BSE: public health, animal health and trade. Proceedings, Joint WHO/FAO/OIE, Paris, June 11-14, 2001: 23.*

Livestock and Feed Mixing

Adapted from the CFIA factsheet *Preventing Animal Disease* and the *Signature Feed Manufacturing Protocol*
Kathy Zurbrigg, Veterinary Science, OMAF

The announcement of a case of BSE in Western Canada has placed many aspects of the livestock industry under increased public scrutiny. This one confirmed case also sparked Maple Leaf's recent decision to slaughter only those pigs fed diets that do not contain animal protein. This is an excellent time to review feed-handling and record-keeping procedures with your clients to ensure that they meet the Canadian Food Inspection Agency's current feed ban regulations.

**This is an excellent
time to review feed-
handling and record-
keeping procedures
with your clients**

1. Do not feed ruminants feedstuffs intended for poultry, swine, horses or pets.
2. Keep records and invoices of all purchased feeds and feed ingredients, including the supplier's name and address, the date of purchase and the amount. Store these records for two years.
3. Store and handle ruminant and non-ruminant feeds separately to avoid cross contamination. Use dedicated equipment for mixing ruminant feeds. If this is not possible, the CFIA has three approved methods for cleaning equipment to avoid contamination of feed between batches.

- **Sequencing** - non-ruminant feed containing a prohibited material is followed by another non-ruminant feed containing no prohibited material, prior to mixing ruminant feed.
- **Physical cleaning** - sweeping or vacuuming the equipment after feed containing prohibited materials is used and prior to a ruminant feed being placed in the equipment.
- **Flushing** - a volume of material is flushed through the system after feed containing prohibited materials is made. The flush material is now considered to contain prohibited materials and must be properly disposed of or fed to non-ruminants.

In accordance with Maple Leaf's new guidelines for feeding pigs intended for their slaughter plant, **if an on-farm feed mixer receives feed for both ruminants and non-ruminants, the system must be flushed with 100 kg of vegetable product or limestone after containing feed with meat and bone meal.** Feed mills must also abide by these regulations if they are to feed hogs intended for Maple Leaf Foods.

Managing On-farm Mortalities

Adapted from the *Managing On-Farm Mortalities* infosheet, Gary Koebel, Livestock Mortality Specialist, OMAF and *Composting Dead Animals*
Ann Godkin, Veterinary Science, OMAF

All livestock producers are responsible for disposing of livestock mortalities in an environmentally safe and timely manner. Under the *Ontario Dead Animal Disposal Act* (ODADA), all dead cattle, swine, sheep, goats and horses must be disposed of within 48 hours after death.

There are currently three approved methods for animal disposal:

1. Contact a provincially licensed collector for pick up.
2. Compost.
3. Bury the animal under 60 cm (2 feet) of soil away from all waterways.

On-farm incineration is **not** an approved method of deadstock disposal.

Not abiding by the ODADA regulations can result in a fine. Penalties for a first offence can be up to \$2000. A subsequent offence can result in a fine of up to \$5000 or a jail term of up to 6 months.

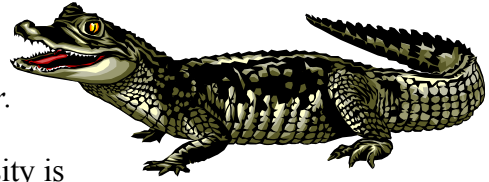
Helpful resources on composting for you or your clients include:

- Composting Livestock Mortalities, OMAF Factsheet by JR Morris, T. O'Connor, F. Kains and H. Fraser. www.gov.on.ca/OMAF/english/livestock/sheep/facts/97-001.htm
- Natural Rendering: Composting Livestock Mortality and Butcher Waste. Cornell Waste Management Institute. Factsheet by Jean Bonhotal, Lee Telega and Joan Petzen. www.cfe.cornell.edu/wmi or call (607) 255-1187
- Field Guide to On-Farm Composting. NRAES publication #114 by Dougherty. This is a 128-page booklet and covers everything in an exceptionally useable format. To order, refer to www.nraes.org or call (607) 255-7654. Additional resources are available on this web site.
- Cow Mortality Disposal (AG-507) by Clell V. Bagley, John H. Kirk and Kitt Farrell-Poe. <http://www.ext.usu.edu/publica/agpubs/ag507.pdf>

If you are unable to access any of these publications, please contact us.

See You Later Alligator. . .

Excerpt from the Association for Veterinary Epidemiology and Preventative Medicine Spring/Summer 2003 Newsletter.



Kris Kohl, an agricultural engineer with Iowa State University is investigating the use of alligators as a new, low cost method of swine carcass disposal. He suggests that this method is low cost and, as an added bonus, hog farmers are provided with a second income from the alligator meat and hides.

Repetitive Trauma to the Nuchal Ligament – gall, callus, hygroma, and bursitis

Neil Anderson, Veterinary Science, OMAF

No way to treat a lady. A dairy farm's main employee, the cow, comes to work every day without complaint and gives 100% for the farm. It is astonishing that the health and safety of such a faithful employee could be ignored. Photos 1 to 4 show ill-fitting equipment, neck injuries, and cows chafing in a stall, made restless by a needless gall.

Neck injuries. Some farms have no cows with injuries. On other farms, the frequency varies from a few to the majority of cows in the herd. Injuries occur when the skin, the nuchal ligament and its bursae, and the spinous processes of the first few thoracic vertebrae at the withers experience repetitive trauma.

Unnoticed until audited. Eric's visitors are awestruck by his immaculate husbandry and magnificent cows, so much so that they overlook blemishes. Eric coped with the neck injuries on his cows by ignoring them - until the day he hosted a cow comfort workshop. At this workshop, the participants scored his cows for specific signs of discomfort and found the frequency of neck injuries was high. Eric said the chafed necks had been bothering him for some time but he couldn't come up with a solution. He welcomed recommendations for prevention. Eric's story is common – caring producers are looking for ways to prevent the injuries.

Neck rails and straps – free-stall barns. The cow in **Photo 1** and many of her herd mates at Jake's farm have a noticeable swelling in the region of the supraspinous bursa. The lesion is due to repetitive pressure and injury to the nuchal ligament and its bursae. The cows in Jake's barn experience trauma from the nylon strap when they stand in the stall, during the motions to lie, or during the motions to rise. The location of the neck rail/strap, a short bed, and a rounded bedding keeper at the curb forces Jake's cows to squeeze into the stalls with their hind feet placed abnormally forward to avoid the bedding keeper and their necks wedged under the neck strap – like square pegs being fitted into round holes.

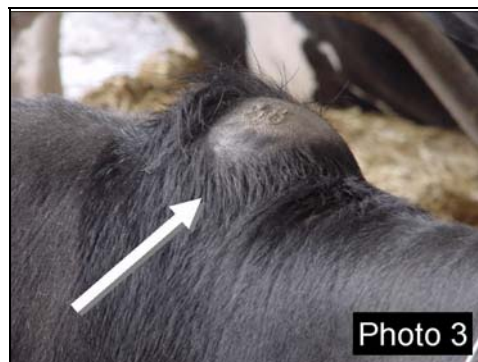


Feed bunk restraints. **Photo 2** was also taken in Jake's barn. Jake wanted a feed bunk restraint that would prevent his smallest cows from escaping while allowing the largest cows to reach forward for feed. He chose the restraint shown in Photo 2 – one that pivots on an upper bracket.

While feeding at this bunk, his cows bear the weight of the barrier along the nuchal ligament from skull to withers. Jake's small cows are at reduced risk of the repetitive trauma to their neck because they bear little of the burden when larger cows are feeding. The largest cows bear the heaviest burden of this 'yoke' and are at greatest risk of repetitive trauma injuries to their necks.



Photo 3 shows swelling and hair loss in the region of the supraspinous bursa of a Holstein cow in Paul's free-stall barn. The barn has a feed bunk with a post and rail feed barrier. The source of the injury was repetitive trauma from an ill-fitted pipe used as a barrier at the feed bunk (**Photo 4**). Other cows in the herd had hair loss, with and without chafing of the skin, and varying degrees of swelling. Paul has known the cause of and the prevention for the injuries for several years. Nevertheless, his concern for an escape through the bunk outweighs his concern about the injuries.



Tie rails in tie stalls. Neck injuries also can be found on cows in tie-stall barns. It's puzzling that neck injuries are rare in some barns with low tie rails and common in other barns with tie rails fitted at the same location. The sparing effect may be the traction afforded by a very good bedding pack or a rubber filled mattress when cows rise or lie down in the stalls. Cow size, ability to cope, scant bedding, slippery bed surfaces, a manger level with or lower than the cow's feet, or short tie-chain length also may be risk factors. While visiting at Dave's barn, one with a low tie rail and short tie chains, I smelled the distinct odor of rotting flesh coming from Dave's largest cow. She was suffering from infection of the supraspinous bursa. Dave was an adopter who implemented many excellent cow comfort ideas into his old barn. The latest, rubber filled mattresses, effectively lowered the height of his tie rail – and his largest cow suffered. Dave, the adopter, like many of his peers who strive for cow comfort in older barns, needed little encouragement to relocate the tie rail - raising and moving it forward, and lengthening the tie chains.



Prevention – a shared task. Repetitive trauma injuries to the neck have been known since man first yoked oxen or harnessed horses. In 1901, *“The Successful Stockman and Manual of Animal Husbandry”* carried the following advice. “Should ill-feeling or badly made harness gall a horse, they must be refitted at once, or laid aside for other and better ones. The remedy for such abrasions is simple and effective if the cause be removed without delay.”

The reasons for the neck injuries shown in the photos are just as obvious as the reasons for yoke galls in oxen or collar galls in horses. The advice for prevention should be equally straight forward.

“If the stabling injures cows, refit it immediately, or remove it and replace it with better stabling. The remedy for neck injuries is simple and effective – remove the cause without delay.”

The common advice to locate the feed barrier rail 46 inches above the cows’ feet is incorrect for mature Canadian Holsteins. With minimal expense and labour, producers are repositioning the feed bunk rail higher. Indeed, there is little justification for delaying this simple remodelling.

Photo 5 shows the post and rail barrier at a feed bunk in a 4-row free-stall barn built last summer. The rail is mounted 51 inches above the cows’ feet and about 8 inches forward of the centre of the manger curb. The height is about 85% of the rump height of mature Holsteins. No cows have escaped and none show signs of neck injury. As the photo shows, the stabling is adjustable and could be altered to suit cow size. In tie-stall barns, producers have relocated the tie rail to 46 to 50 inches higher than the cows’ feet, 10 inches forward of the manger curb, and lengthened the tie chain to just touch the top of the manger curb.



Some producers are unaware that their cows have the injuries, that the injuries are significant, or that their barn design is a contributing factor. The efforts of many are necessary to stimulate action to prevent neck injuries of dairy cows. Inspections that include audits for injuries and recommendations for changes could facilitate an end to these unnecessary injuries.

An easy yoke and a light burden. Dairy facilities must allow cows to perform normal activities. Our progressive dairy producers and their advisors are building these barns. Please, audit the cows in your care for repetitive stress injuries. Identify the causes. Make the necessary changes. Give the cows in your care a safe and healthy workplace. Rest well, knowing that no cow in your care is uncomfortable because of a needless injury. An easy yoke and a light burden are part of our responsibility to the cows.

The yokes He made were true,
because the man who dreamed was too
a craftsman. The burdens that the oxen drew
were light.
At night
He lay upon his bed and knew
no beast of his stood chafing in a stall
made restless by a needless gall.

Anon

1. *Gardenier, Andrew A, Editor. Gill, HD, Assistant Editor. The Successful Stockman and Manual of Animal Husbandry. Springfield, Mass: The King-Richardson Co., 1901.*
2. *Harrison, Paul T. A Companion to the Gospel of Matthew. West Chermside Queensland, Australia, 1995. <http://eis.net.au/~paulh/MATTHEW/mwyokes.htm>*

Swine Euthanasia - in the truest sense of the word

Sue Burlatschenko DVM, Goshen Ridge Veterinary Services, Tillsonburg



The dictionary definition of euthanasia is “the deliberate putting to death, in a painless, easy manner, of one who is suffering.” On swine farms a variety of techniques are used to put animals to death. Sedating animals prior to an injection of T-61 or Euthanyl allows for a “painless and peaceful” experience for the animal, veterinarian and the producer.

A suggestion for sow euthanasia is as follows:

Mix 1.5 ml of xylazine (100 mg/ml) with 1.5 ml of ketamine (50 mg/ml) in the same syringe. Inject the mixture intramuscularly into the sow and wait approximately 15 minutes for the sow to get wobbly and lay down. If the sow does not become wobbly within 20 minutes, inject the equivalent amount of the mixture again and wait for sow to lay down.

At this point check for an irritability response, flip her ear and tap around the eye. A well-sedated sow should not respond to these irritations. Find an ear vein and occlude the vein at the base (proximal end) of the ear. While occluding the ear, with one hand gently insert a 22 g x $\frac{3}{4}$ inch needle into the ear vein. Once the needle is in the vein, carefully attach the syringe to the needle and slowly inject 5-10 ml of T-61. Slow injection is important in order not to bleb the vein. Death will occur rapidly after injection.

For pigs with poor ear veins or terrible blood pressure, sedate as above and then do the irritability test. Once no response is obtained, insert a 3.5 inch spinal needle into the heart. Inject the T-61. Again death will occur quickly after the injection starts.

Effect of Euthanized Animals on Rendered Products

Robert Vanderwoude and Michelle Jansen, Meat Inspection Policy and Audit Services, OMAF

Pentobarbital, the barbiturate commonly used in euthanasia solutions, can survive the rendering process. The drug binds to proteins and may be detectable in rendered protein products (e.g., meat and bone meal), if present. Due to the large batch size used in deadstock rendering, it would only be detected if the “right” grab sample were tested.

The Canadian Food Inspection Agency (CFIA) monitors deadstock for contaminants such as sulpha drugs, lead and arsenic. Although the presence of euthanizing drugs in feed has been a CFIA concern, euthanizing (and tranquilizing) drugs are not currently within the scope of their monitoring program. Since these drugs are not part of a monitoring program and little research has been done on this subject, there is no data to indicate the magnitude of the problem.

A 2002 report on the risk from pentobarbital in dog food indicates that it is highly unlikely for a dog consuming dry dog food to experience any adverse effects from exposure to the low levels of pentobarbital found in the dog food they surveyed. It appears that the large batch size eliminates the risk. However, there have not been any studies addressing the long-term effect of low-level exposure to this drug. The presence of several euthanized animals in a batch may be harmless but, as the level of and/or exposure to this contamination increases, the potential effects are unknown.

A safety strategy, beginning with education and awareness of these potential contaminants in rendered products, may help to reduce the risk to animals consuming feeds made from them. Veterinarians, caregivers, and renderers may recommend that euthanized animals not be sent to a rendering plant.

Animal Hoarding Not Just a Problem Limited to Companion Animal Practice

Kirsten Graham, Veterinary Student, Ontario Veterinary College, University of Guelph

Animal abuse takes on many forms ranging from passive neglect to active cruelty. One such form is animal hoarding – the collection of an abnormal number of animals kept in substandard conditions combined with a denial of the severity of the situation on the part of the owner.



While animal hoarding most commonly involves cats – the stereotypical neighbourhood “cat lady” – farm animals have been implicated in 11% of cases in the United States, according to a study by Dr. Gary Patronek.

Mental illnesses including obsessive-compulsive disorder, addiction, and dementia are suspected to play a role in many cases of animal hoarding. However, hoarding behaviour may also arise from a childhood upbringing in a chaotic household where the only stable feature was the presence of animals. Regardless of the root of the problem, veterinarians should be aware of the animal hoarding syndrome.

The typical animal hoarder feels an intense need to be surrounded by animals and will make an active effort to acquire additional animals. They may be perceived by the community as a good Samaritan who rescues homeless or maltreated animals. Some people become oblivious to their animals’ requirements and hostile towards animal care professionals. Hoarders claim to love their animals and they refuse to give up any of their charges. Even dead animals may be kept on the premises for an extended period of time. The hoarders, as well as their animals, may have poor health and hygiene problems. It is not uncommon to find nonfunctional utilities and appliances in the hoarder’s residence.

Large animal practitioners may find the decision to report animal abuse a difficult one. Gaining the trust of an animal hoarder is key to solving the situation quietly. Hoarders commonly believe they are the only people able to care for and communicate with their animals. Acknowledging these efforts may lead to cooperation. Gradual reduction in the number of animals may be negotiable once their confidence has been gained. Encouraging the individual to seek medical help and financial assistance may also be of benefit to the success of the intervention.

Unfortunately hoarding behaviour has a high rate of relapse and often the situation is too serious to be resolved through cooperative efforts of the owner and the veterinarian. In such cases a joint effort with the local humane organization and a social services group may be indicated. The role of the practitioner is of paramount importance in the investigation of hoarding cases. Veterinarians have a moral and social obligation to report animal abuse to the appropriate authorities.

Modern Swine Production, Hospital Pens and Analgesia

Tim Blackwell, Veterinary Science, OMAF

Our responsibility as veterinarians is to prevent the needless suffering of animals. The best-managed swine farms on which we work have a very low prevalence of disease and therefore only a sporadic casualty pig. These farms often do not have a protocol to deal with severely disabled individual pigs.



The first step in dealing with a pig that needs treatment is to determine whether the pig is likely to respond rapidly to the treatment if left with its penmates. For example, a pig with an acute case of erysipelas may be identified early enough to respond well within 24 hours to treatment. However, a pig with severe signs of meningitis may take several days of treatment before it is able to compete in a group environment. Pigs that are unlikely to respond rapidly to a treatment administered in their pen should be removed to a designated hospital pen. The size and number of hospital pens on a farm must be determined on a farm by farm basis. If a farm, at any one time, averages two to three pigs requiring individual attention, then a pen for two to three pigs would be a reasonable size for the hospital holding area.

Ideally, the hospital pen should be located close to where medications are stored and one person should be assigned the task of administering treatments to pigs in the hospital pen(s). Veterinarians should establish standard treatments for the common diseases that require removal to the hospital area. These treatments should include dosage, expected response to treatment, when to change treatments, and when to stop treatments. Equally important are established withdrawal times for all medications prior to slaughter. When treatments are stopped, a decision must be made whether to return the pig to its original pen, to continue to raise the pig in a separate area, or to euthanize the pig. Veterinarians can help producers establish criteria for each category.

When possible, hospital pens should be constructed with at least a partially solid floor and bedding. Solid floors provide better footing for pigs removed because of lameness and bedding allows pigs more thermal control over their environment.

Significant progress in the field of veterinary analgesia has occurred in recent years. Evidence is increasing that both people and animals recover more quickly when severe, debilitating pain is relieved.^(1,2) Unfortunately the use of appropriate analgesia is often not part of the treatment regimen for painful conditions such as infectious or traumatic arthritis in growing swine, suspected spinal lesions in sows, or meningitis in young pigs. The use of analgesics may improve recovery rates in selected conditions and providing analgesia is part of our responsibility as veterinarians.

The decision to euthanize a pig is best made by the person working in the hospital area, based on guidelines established by the caretaker in consultation with the veterinarian. The person performing the euthanasias may or may not be the same person administering the treatments. Euthanizing even the sickest animals in a herd can be a very stressful job and the person performing the euthanasias should do the task voluntarily and be properly trained. Occasionally, veterinarians may euthanize animals in the hospital pens for the purpose of postmortem examination.

Advantages of hospital pens include: removing infectious animals from a group, quick identification of the number of severely affected pigs on the farm at any one time, improving the chance that the most severely affected individuals receive appropriate and repeated treatments, and ensuring that pigs requiring euthanasia are easily identified.

Hospital pens should be part of the design of any modern swine farm. They improve the proportion of successful treatments, improve the welfare of individual pigs, and make treating pigs faster and easier for the producer. The design of appropriate hospital pens, treatment protocols including analgesia, and stopping rules for treatments are worthwhile topics for the next herd health visit.

1. Moberg GP. *When does stress become distress? Lab Animal* 1999; 28 (4): 22-26.
2. Bonica JJ. *Postoperative pain*. In: Bonica JJ, ed. *The Management of Pain*. 2nd ed. vol 1. Philadelphia: Lea & Febiger, 1990.

West Nile Virus Surveillance for 2003

Paul Innes and Bob Wright, *Veterinary Science, OMAF*



The Ontario Ministry of Agriculture and Food (OMAF) is conducting an awareness campaign to provide information on West Nile virus and to advise Ontario horse owners about equine vaccination and testing. OMAF is focusing its efforts in three key areas: education, surveillance and diagnostics (development of a laboratory facility to process West Nile virus samples).

OMAF has been educating horse-owners about the risk of West Nile virus (WNV) to horses. These extension meetings were attended by 2,738 horse owners. The key messages are that the best protection for horses is proper vaccination, appropriate mosquito control and preventing exposure to mosquitoes. A new information sheet, *Controlling Mosquitoes on Horse Farms and Rural Properties*, is available on the Ministry web site, www.gov.on.ca/OMAFRA/english/livestock/horses/facts/info_mosq.htm

A serologic survey of Ontario horses was conducted over the winter and spring to determine a baseline for year 2002. Horses that were residents of Ontario and unvaccinated were chosen. 740 samples were collected from the thoroughbred, standardbred and pleasure horse sectors.

Horse owners should be aware of the importance of proper vaccination. The vaccine must be given according to label directions if it is to be protective. This means 2 doses given 3-6 weeks apart. A single dose offers little or no protection. A booster within 4-6 months of the peak risk period of August-October will further enhance immunity. While the vaccine currently available has been shown to be effective in reducing clinical disease from WNV, **no vaccine is 100% effective**. For this reason, horse owners should reduce the risk of infection to horses, and themselves by minimizing contact with mosquitoes.

We expect cases of WNV in Ontario horses again this year. The Animal Health Laboratory (AHL) will be offering IgM and IgG ELISA tests for clinical cases in 2003, in addition to immunohistochemistry and PCR for post-mortem investigations. If you are submitting samples from a horse with neurologic signs and are suspicious of WNV, please ensure that you provide details about the location and travel history of the horse for the 14-day period preceding the onset of clinical signs. Suspected cases of WNV in other species should be investigated in the normal manner for a neurologic case. The live animal diagnostic tests have only been validated for horses, so results for any other species would not be meaningful.

The tracking of positive WNV equine cases is an important part of the public health surveillance program. With the help of the Veterinary Teaching Hospital and the Animal Health Laboratory, OMAF will collect and analyze the information. ***Personal client information is kept strictly confidential.*** The township location of the infected horses is required to determine if and where additional prevention efforts may be needed. This information is also an invaluable part of the ongoing research into the epidemiology of WNV and its impact on the Ontario horse industries. Accurate case data is important to effectively allocate resources and plan for the upcoming year. Please advise OMAF of any positive cases diagnosed through a laboratory other than the AHL.

WNV is not going to be eradicated. Current evidence suggests the virus has become established in Ontario, and will remain endemic. It is not possible to predict what the risk will be from year to year. The scientific knowledge and the biology of the virus in North America are still unfolding. Recommendations are based on the current situation and state of knowledge.

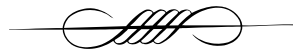
Swine Medicines Course Update

Tim Blackwell, Veterinary Science, OMAF

It was previously proposed that the purchase of livestock medicines from livestock medicines' outlets should be limited to individuals who had successfully completed a livestock medicines course. In anticipation of this change in the regulations, certificates that were sent to producers who passed a swine medicines course contained an expiry date. This expiry date was based on the assumption that certification would need to be renewed every five years similar to the pesticides safety program.

Currently, certification from a livestock medicines course is not required to purchase over-the-counter livestock medicines. However, a working understanding of the proper uses of medications on livestock farms is as important as ever. Ontario Pork continues to support and administer the swine medicines program from its office in Guelph. All other livestock medicines programs will be administered through the livestock medicines certification program at Ridgetown College. Veterinarians are encouraged to continue to support these programs. The prudent use of medications on livestock farms is critical to the success of the quality assurance programs administered by the various commodity groups.

If you have any questions regarding the swine medicines program, please contact Tim Blackwell at (519) 846-3413. For all other livestock medicine courses, contact the livestock medicines program at Ridgetown College 1-877-480-9992, Fax: (519) 674-1560, E-mail: lmep@ridgetownc.uoguelph.ca, or refer to their web site, www.ontariolivestockmed.com/



Greatness is not in where we stand, but in what direction we are moving. We must sail sometimes with the wind and sometimes against it - but sail we must, and not drift nor lie at anchor.

- Oliver Wendell Holmes

Heightened Security - The Threat of Bioterrorism

Paul Innes, Veterinary Science, OMAF

The Canadian Food Inspection Agency (CFIA) recently issued a notice of heightened security at border points of entry. Food safety surveillance and diagnostic laboratory capabilities have also been enhanced as part of a five-year Public Security and Anti-Terrorism initiative.

The US Department of Homeland Security (DHS) identified the US food supply and agriculture as a potential terrorism target. Those at all levels of livestock production, including veterinarians, are urged to be vigilant for signs of unusual diseases, conditions, patterns of clinical illness or loss of production, or any unusual or unexplained adverse animal health event. Of particular concern are:

- Sudden, unexplained animal deaths;
- Severe illness affecting a large percentage of animals;
- Blistering around an animal's mouth, nose, teats or hooves;
- Unusual ticks, maggots or other parasites;
- Staggering, falling or other central nervous system disorders.

The US Department of Agriculture (USDA) and DHS have also funded a national training program for private veterinarians, teaching them to recognize foreign animal diseases in livestock. For more information, visit www.usda.gov/homelandsecurity/homeland.html. The CFIA have offered similar training programs for government veterinarians.

The US Centers for Disease Control and Prevention has produced a list of the most likely biological agents to be used in an act of bioterrorism (www.cdc.gov). While most of these are strictly human pathogens, some have agricultural significance.

The probability of a bioterrorist attack on Ontario livestock is low. Nevertheless, veterinarians should remain vigilant.

More information on Foreign Animal Disease (FAD) reporting is available from the CFIA at www.inspection.gc.ca/english/anima/heasan/fad/privete.shtml



Poultry Heat Stress Project

Babak Sanei, Veterinary Science, OMAF



Excessive heat during the summer months has caused reduced performance and high mortalities in broiler flocks. Last summer, many Ontario chicken producers experienced losses in their flocks due to the unusually high temperatures. The Ontario Ministry of Agriculture and Food, the Chicken Farmers of Ontario and the Poultry Industry Council are collaborating on a project to investigate heat stress in poultry. The objective is to identify the risk factors that are associated with losses due to heat (e.g., ventilation, feeding, water and housing) and to identify factors that may reduce losses due to heat stress in future years. Last October, a survey was sent to all Ontario broiler producers. More than 300 producers responded to the survey. The objective of the survey was to obtain baseline information and to identify producers willing to participate in the second part of the heat stress project.

Some findings from the first heat stress survey include:

- 29% of producers indicated that their flocks experienced problems due to heat stress.
- Combinations of air inlets (one side) and exhaust fans (opposite wall) were the most frequent ventilation system (used by 81% of the farmers who responded). This type of ventilation system was used 86% of the time when a heat stress problem was indicated. The other 14% of the time that heat stress was indicated a tunnel ventilation system was utilized.
- About 65-69% of the producers indicated that they don't have any cooling system (such as misters or sprinklers) on their farms.

Between fifty and sixty broiler producers were selected. They will be contacted to set up appointments for on-farm visits and to complete a more comprehensive survey to determine key factors that lead to heat stress. The project will be completed by the end of August 2003. Any veterinarians with questions regarding the project should contact Dr. Babak Sanei, Veterinary Scientist, OMAF, babak.sanei@omaf.gov.on.ca

Changes to the List of Reportable Diseases

Paul Innes, Veterinary Science, OMAF

On May 1, 2003, several amendments to the federal *Health of Animals Act* came into effect. The Canadian Food Inspection Agency (CFIA) has created "Immediately Notifiable" and "Annually Notifiable" categories of animal disease in addition to the "Reportable" list.

The two new notifiable lists will include diseases for which no control programs currently exist. The information will be gathered primarily to meet Canada's international obligation for surveillance of diseases of animal and public health significance. The CFIA will decide on a case-by-case basis whether to act upon the information. Unlike the Reportable Disease category, only veterinary diagnostic laboratories are required to notify the CFIA of a suspicion or a diagnosis of a disease in either of the notifiable categories. Currently, under the *Reportable Disease Regulations* (RDR), anyone caring for or having control over animals, including owners, veterinarians or laboratories, are required to inform the CFIA of the presence of any disease listed as "Reportable." Reportable diseases are those that the CFIA plans to control or eradicate.

The "Immediately Notifiable" list includes four poultry diseases (ILT, ornithosis, epidemic tremors, and fowl cholera) present in Canada and Ontario, which occur infrequently but must be

excluded from exports to China and Russia. The list also includes West Nile virus and Eastern Equine Encephalitis virus (previously listed as reportable), which are of concern to the horse industry.

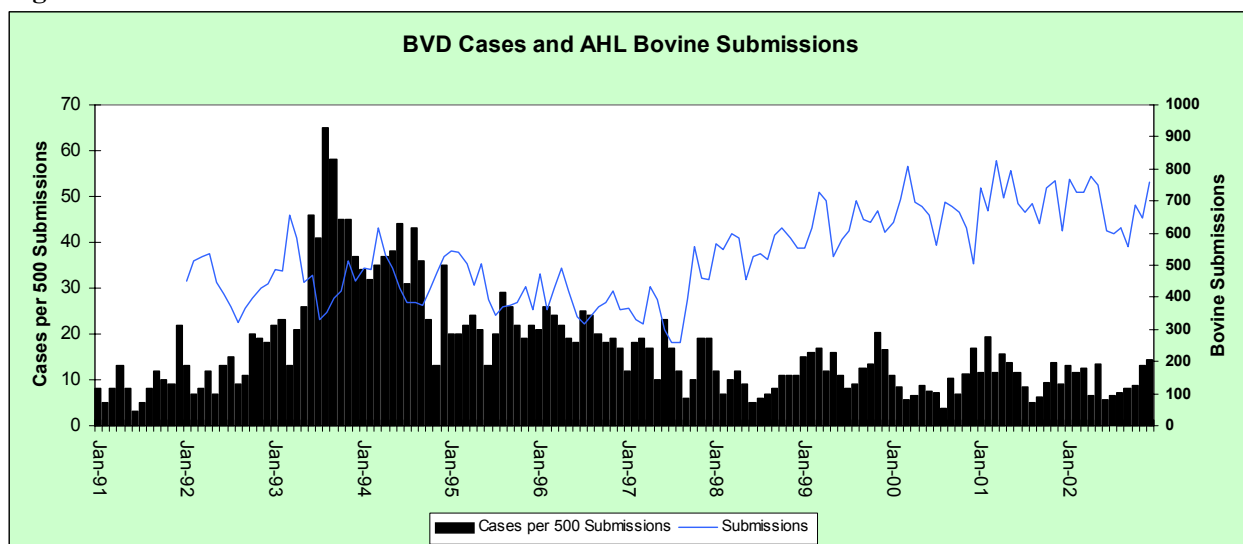
More information on these changes and the *Health of Animals Act* is available from the CFIA at www.inspection.gc.ca/english/reg/approe.shtml.

BVD Surveillance 2002

Paul Innes and Kathy Zurbrigg, *Veterinary Science, OMAF*

Since the significant rise in the number of BVD cases in 1993-1995, the provincial patterns have been monitored. The 2002 report on BVD cases in Ontario is now complete. The Animal Health Laboratory, Laboratory Services Division, University of Guelph, diagnosed 171 cases of Bovine Viral Diarrhea virus in 2002 (through virus isolation, acute and convalescent serology and histopathology). This is a decrease of 32 cases from 2001. Some farms had multiple cases of BVD diagnosed through the AHL, therefore the number of affected farms (159) was less than the number of cases. **Figure 1** shows the cumulative cases relative to bovine submissions since 1991.

Figure 1: BVD cases relative to submissions to the AHL from 1991-2002.



Twenty four percent of the cases originated from Eastern Ontario (defined by K postal code), which is lower than previous years (32% in 2001 and 25% in 2000). However, this is consistent with the proportion of bovine submissions to the AHL from eastern Ontario (28%).

The percentage of cases attributable to beef herds in 2002 was similar to previous years (26.4% compared to 27.6% in 2001). Dairy and veal contributed 67.3% and 6.3% respectively.

Age information was provided for 73% of cases, an improvement over previous years. In regions other than Eastern Ontario, an increase in cases was seen in calves aged 6-12 months in January. Overall, the number of cases seen in the winter and spring of 2002, for calves under 12 months, decreased from the same time period in 2001.

Of the affected farms, most reported low morbidity and mortality data. Those with high mortality often imported calves from multiple sources.

Continuing Education

- July 13 - 18, 2003 3rd International Veterinary Vaccines and Diagnostics Conference, University of Guelph, Guelph, Ontario. www.IVVDC.org
- July 19 - 23, 2003 American Veterinary Medical Association Annual Convention, Denver, Colorado. Contact (847) 925-8070, www.avma.org
- Aug. 1, 2003 Fourth Annual Continuing Education Seminar for Equine Veterinarians. East Rutherford, New Jersey. Contact (732) 249-8500, e-mail: gsulcer@hambletonian.org
- Aug. 6 & 7, 2003 Regional meeting of the National Mastitis Council, Michigan. Agenda and information posted at www.nmconline.org
- Sept. 12 & 13, 2003 Ultrasound. Module 1 — Fundamental Principles & Applications, Ontario Veterinary College, University of Guelph, Guelph, Ontario. Certificate awarded from the Ontario Veterinary College for 28 hours of CE credit. Contact Lifelearn Inc., MacNabb House, University of Guelph, Guelph, Ontario N1G 2W1, (519) 767-5043 or 1-800-375-7994, fax: (519) 767-1101, www.lifelearn.com
- Sept. 18 - 20, 2003 American Association of Bovine Practitioners Annual Meeting, Columbus, Ohio. Contact (706) 232-2220, www.aabp.org
- Sept. 21 - 24, 2003 Is there a future for antibiotics in animal agriculture? Nashville, Indiana. Presented by the American Dairy Science Association. www.adsa.org/discover/
- Oct. 15 - 17, 2003 8th Congress of the World Equine Veterinary Association, Sheraton Buenos Aires Hotel and Convention Center, Buenos Aires, Argentina. Contact the World Equine Veterinary Association, or the 2003 World Equine Veterinary Association Congress, www.iaep.com/weva/ or www.congresosint.com.ar
- Oct. 24 & 25, 2003 Ultrasound. Module 2 — Principles & Applications — Intermediate, Ontario Veterinary College, University of Guelph, Guelph, Ontario. Certificate awarded from the Ontario Veterinary College for 28 hours of CE credit. Contact Lifelearn Inc., MacNabb House, University of Guelph, Guelph, Ontario N1G 2W1, (519) 767-5043 or 1-800-375-7994, fax: (519) 767-1101, www.lifelearn.com
- Nov. 6, 2003 Fall CE meeting of the Ontario Association of Bovine Practitioners, Guelph, Ontario. Information will be posted at www.oabp.ca
- Nov. 18 & 19, 2003 Penn State Nutrition Conference. E-mail: cjones@psu.edu, www.das.psu.edu/dcn
- July 11 - 15, 2004 23rd World Buiatrics Congress, Quebec. www.wbc2004.ca

Rising to the Task

*David Alves, Provincial Veterinarian and
Manager, Veterinary Science, OMAF*



I am constantly reminded of the diverse circumstances where veterinarians work and provide service. In Ontario, some examples included:

- Local practitioners assisting OMAF, the CFIA, Medical Officers of Health, and the OSPCA in two difficult animal welfare cases;
- Providing extension work to help prevent West Nile Virus infection in horses;
- Participating in the next round of Dairy Health Management Certificate modules;
- Assisting Provincial Veterinarians in other provinces embroiled in the biology and politics of BSE;
- Organizing an international Geographic Information System and Animal Health conference;
- Assessing the risk of pathogens in livestock manure;
- Planning and participating in a simulation of a provincial Avian Influenza outbreak;
- Teaching future Registered Veterinary Technicians;
- Assisting in the public health work against SARS.

Our oath as veterinarians refers to public health, animal welfare and continuous learning. It is a credit to the profession how veterinarians continue to rise to the occasion - over and above background daily commitments. This week, from my little world, veterinarians seem to get the job done.

I hope you enjoyed this issue of **CEPTOR**. As you know, it had a strong animal welfare focus. Please respond to us with any comments or ideas for improvement. Hope all is well as we head into a challenging summer.

David Alves
(519) 826-3127

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Kathy Zurbrigg, Veterinary Science, OMAF, Wellington Place, R.R. # 1, Fergus, Ontario N1M 2W3

Tel: (519) 846-3418

Fax: (519) 846-8101

E-mail: kathy.zurbrigg@omaf.gov.on.ca

Comments:

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