CEPTOR

Animal Health News
Volume 11, No. 3, November 2003

ISSN1488-8572

Non-ambulatory Livestock Transport: The Need for Consensus

Adapted from *National Livestock Consultations Information Package* and *Non-ambulatory Livestock Transport*, Gordon Doonan, Martin Appelt, Alena Corbin, Canadian Vet J 2003; 44: 667-672.
Kathy Zurbrigg, Veterinary Science, OMAF

There is growing concern from the public, industry and the veterinary profession about the fate of non-ambulatory animals. The concerns are due in part to the lack of specific, objective regulations regarding the definition of "fitness for transport." This leaves the decision open to a wide range of interpretations. These conflicting views lead to inconsistent practices. Currently, the key national legislation regarding the transport of animals is the *Health of Animals Act*. These prohibit the loading or transport, by air, land, or water of an animal that "by reason of infirmity, illness, injury, fatigue, or any other cause, cannot be transported without undue suffering during the expected journey." With the use of such terms as "undue suffering," it is important that veterinarians reach some common ground regarding what is acceptable relative to the transport of livestock.

The Canadian Food Inspection Agency (CFIA) conducted a national, non-statistical survey to study the frequency of non-ambulatory animals being transported to a number of federal slaughter plants and auction markets. During 2001, 7,382 down cattle were seen at the sampled facilities. Of these cattle, 89.8% were classified as dairy and 10.2% as beef. The majority of these animals were down on the farm, with less than 1% occurring during transport. Inspection led to carcass condemnation in 37% of the non-ambulatory dairy animals.

A survey of market hogs and cull sows entering a sample of federally inspected facilities was also completed. In 2003, over a period of two months, 4,684 non-ambulatory animals were seen at the sampled plants and auction markets. This represents 0.13% of the animals inspected during that time period. After inspection, 27% of the down animal carcasses were fully condemned and another 32% were partially condemned. Contrary to the findings with cattle, the data indicated that the pigs became non-ambulatory in approximately equal numbers on the farm and during transit.
(continued on page 3)

One copy per clinic
Please circulate to all practitioners.

☐ _____
☐ _____
☐ _____
☐ _____

Ontario
Agriculture and Food
Veterinary Science

Serving Ontario through
veterinary science, technology transfer,
outbreak investigation, and
animal health surveillance

Tel: (519) 846-0941
Fax: (519) 846-8101

CEPTOR is published by:
OMAF, Veterinary Science - Fergus Resource Centre
Wellington Place, R.R. # 1, Fergus, Ontario N1M 2W3

Editors: Kathy Zurbrigg and Tim Blackwell

Staff:

Guelph:	David Alves (Guelph)	(519) 826-3127
	Fax:	(519) 826-3254
	Babak Sanei (Guelph)	(519) 824-4120 ext. 54650
	Fax:	(519) 824-5930
Fergus:	Neil Anderson	(519) 846-3410
	Tim Blackwell	(519) 846-3413
	Ann Godkin	(519) 846-3409
	Paul Innes	(519) 846-3407
	Jocelyn Jansen	(519) 846-3414
	John Martin	(519) 846-3420
	Bob Wright	(519) 846-3412
	Kathy Zurbrigg	(519) 846-3418
	Reception:	(519) 846-0941
	Fax:	(519) 846-8101

Web site: http://www.gov.on.ca/OMAF/english/livestock

Contact
Kathy Zurbrigg
Veterinary Science
Ontario Ministry of Agriculture and Food
Wellington Place, R.R. # 1
Fergus, Ontario, Canada N1M 2W3
Tel: (519) 846-3418
Fax: (519) 846-8101
E-mail: kathy.zurbrigg@omaf.gov.on.ca

(continued from page 1)
Interestingly, the study found that nearly 40% of down cattle and just fewer than 60% of down pigs were at least partially condemned. Growing numbers of federal and provincial plants are refusing to handle downers and several federal plants now charge a fee to euthanize these animals. While this is foremost an animal welfare issue, the human health implications and the economic burden to all aspects of the production, transport and slaughter systems are becoming more apparent. A cost-effective, efficient dead-stock service needs to be part of the resolution to end the transport of non-ambulatory animals.

The following are CFIA-proposed criteria for evaluating fitness for transport.

1. Inability to stand without assistance or to move without being dragged or carried, including animals that, after "splitting," can not walk or suffer severe pain when walking. These are non-ambulatory animals, also referred to as downers.
2. Fractured limbs or fractures to the pelvis or any other fractures that considerably hamper mobility or cause severe pain.
3. Large, deep wounds
4. Severe bleeding
5. Severely compromised general condition, such a emaciation
6. Severe chronic pain that would be aggravated by transport.

Your comments on the criteria and study findings are encouraged and will be used to help shape recommendations given at the upcoming consultations. Please direct comments to Dr. Gordon Doonan at gdoonan@inspection.gc.ca. Please use "non-ambulatory" as the subject line.
Full text of the information package can be accessed at:
www.inspection.gc.ca/english/anima/heasan/transport/indexe.shtml

Raising Johne's-free Calves Workshops for Producers

Jocelyn Jansen, Veterinary Science, OMAF

Raising Johne's-free Calves Producer Workshops will be offered again this fall and winter across the province.
The objectives of the workshops will be:

1) to endorse and teach good calf-raising practices that reduce infection in dairy calves due to contagious/infectious bacterial diseases,
2) specifically, to describe and implement a practical calf-raising program that prevents post-calving infection of calves with Johne's disease, and
3) to endorse the formation of veterinary practitioner-dairy producer disease control teams.

These workshops will be of interest to your dairy clients who wish to begin preparing their herds for certification for low prevalence Johne's disease status or who wish to enhance their ability to sell dairy animals from a herd with a known low prevalence of Johne's disease. Clients who wish to improve overall calf health by reducing infectious disease will also benefit.

Though the meetings are tailored to dairy producers, information for beef producers can be added.

For more information on Johne's disease workshops or organizing a meeting, please contact Jocelyn Jansen at (519) 846-3414.

Deterrents to Exiting Open-front Free Stalls

Neil Anderson, Veterinary Science, OMAF

Open-front free stalls provide space for forward lunging and normal bobbing of the head down and up while lying or rising in the stall. However, they also provide cows with a convenient route for escaping a dominant cow, a cow in heat, equipment used to bed stalls, or other adverse events.

A pipe or nylon strap is sometimes used to prevent cows from exiting through the front of stalls. The usual mounting point for a deterrent is the support post for the loops. This is the mid-point in 16-to-18-foot head-to-head stalls. **A deterrent to exiting must not interfere with the upward bob of the head.** This interference to bobbing could happen with deterrent pipes mounted on the posts in 15-foot head-to-head stalls. If it does, expect unwanted behaviour and stall refusal. A metal ring mounted to the post with a stainless hose clamp provides a useful mount for nylon straps.

Figure 1

Figure 1. For these Holsteins, the deterrent is a pipe (arrow) mounted to the support posts for the loops. A suggested placement is 0.7 x rump height above the stall surface (cow's feet). Only a few cows in this barn were greater than 58 inches rump height. Using cow size information for choosing stall dimensions, the neck rail was located 48 inches (0.83 x rump height) above the rubber filled mattress and the deterrent pipe at 40 inches.

A Brisket Locator Is More than a Board

Neil Anderson, Veterinary Science, OMAF

In free stalls, a brisket locator restricts the forward location of a cow lying in the stall. It defines the forward limit of the bed length measured from the rear curb.

When brisket locators are too high, they interfere with the normal stride taken during rising. A cow usually swings her foot high enough during the normal stride to clear a 4-inch obstacle. This establishes the maximum height above the bed for a brisket locator. The high locator and/or its mounting bracket also obstruct the normal extension of the front legs while resting. In those stalls, cows lie diagonally and extend their legs into the adjacent stall.

Boards and metal pipes have been the most common items used as brisket locators. A variant is concrete in front of a board. Another innovation is a nylon strap attached to the lower pipe of the divider to form a brisket locator. The strap allows a leg to extend below it. However, it violates the height restriction for taking the normal stride. During recent visits to farms with nylon brisket straps, they were found broken, trapping a cow's leg, or dragged back into stalls or flush alleys.

Figure 1. When installed, a cow-friendly brisket locator is 4 inches (10 cm) or less in height above the bedded stall, has a rounded surface and attaches to the stall platform rather than the loops. The forward location should equal the imprint length of a resting cow – about 1.2 x rump height.

Figure 1

A brisket locator should have a rounded and smooth surface to ease movement of legs over it. Brackets can be avoided by mounting the brisket locator on or below the stall surface. A 5-inch (12.5-cm) space between the brisket locator and the loop is essential to prevent entrapment of a leg. In sand-bedded stalls, a novel, wooden mount serves to fasten the brisket locator that is held in place by the sand. In well-maintained sand-bedded stalls, one seldom sees more than two inches of brisket locator.

Figure 2. The arrow points to the normal stride and step ahead of the brisket locator of this cow when she rises. The Poly Pillow™ and its clones meet the requirements of a cow-friendly brisket locator. **A wide loop opening and open-front stalls allow cows to lunge either diagonally or frontward.**

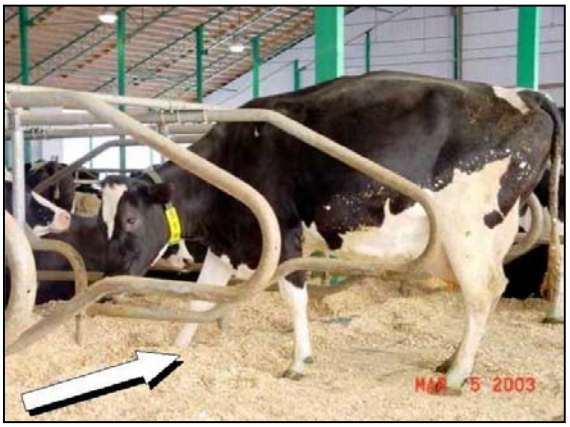


Figure 2

Hazards in the Area Forward of the Brisket Locator

Neil Anderson, Veterinary Science, OMAF

Objects in the essential space forward of the brisket locator are obstructions to normal cow behaviour. The obstructions restrict normal head lunge and bob when lying and rising, the stride when rising, and the forward extension of the front legs while lying. Ideally, this area should be free of obstructions and the same height as the stall bed. Any obstructions in this important area should be considered a fatal flaw in stall design.

Figure 1

The most common obstructions are concrete, stored bedding materials, support pipes for mounting loops, roof-support posts, and brisket boards, pipes, or straps. In open-front free stalls without deterrent pipes, stored bedding or concrete filling this area becomes a serious hazard for cows exiting through the stall. It effectively decreases the vertical height of the opening and contributes to entrapment and injury.

Figure 1. These new stalls are free of obstructions in the area forward of the brisket locator. The cows can bob their chins to the level of their feet and lunge forward. There are no support posts or pipes in this important area. With appropriate planning, roof-support posts could be placed adjacent to the loops.

Improving Provincial Biosecurity

David Alves, Manager, Veterinary Science, OMAF/Provincial Veterinarian

Introduction

We need to continue to improve the provincial level of biosecurity in Ontario. While this includes the usual "boot and brush" type of farm-level biosecurity, **provincial biosecurity** is mostly about major provincial safeguards that prevent significant harm from hazards related to animals. Veterinarians are key to all components of provincial biosecurity. There are many reasons to take notice.

> The impact of many hazards is predictable and preventable. The impact can extend beyond livestock production and involve many other aspects of rural and urban life. The costs of **recovery and compensation** are hundreds of times that of **prevention and early detection**. Strengthening biosecurity in Ontario is a major step to better national biosecurity.

Improving the Components of Provincial Biosecurity – Key Areas for Improvement

1) Broader prevention programs among animal sectors.
2) Early detection through improved diagnostic and targeted surveillance.
3) Improved provincial legislative and national policy framework.
4) Enhanced rural veterinary and other front-line coverage.
5) Improved emergency preparedness.
6) Improved applied research and risk assessment to guide policy.

Some Current Steps Need Your Support:

- All farm-animal veterinary practices can display their "Biosecurity and Animal Health" poster (recently mailed). This will help raise awareness about the services a veterinarian can provide.
- Some industry groups and veterinary groups have teamed up to practice their emergency preparedness (e.g., Poultry Industry Council and the Ontario Association of Avian Practitioners). Other groups could plan similar simulations.
- OMAF is creating a new veterinary position focusing on "Provincial Biosecurity." This position will advance the components of biosecurity in government. You can help raise awareness of this position.
- Improved targeted surveillance for BSE is one model for federal-provincial collaboration. Veterinarians can encourage producers to submit high-risk samples for testing through the Animal Health Laboratory or the CFIA (e.g., mature animals that are down or showing neurologic signs).
- Provincial veterinary groups and industry organizations have been invited to participate in a full review of the OMAF Veterinary Science Program. Forward your comments through your organization executives.

For the full text of this document, please refer to:
www.gov.on.ca/OMAF/english/livestock/index.html and the Veterinary/Public Health section or contact Dr. David Alves, Provincial Veterinarian, (519) 826-3127, david.alves@omaf.gov.on.ca

Salmonella and Antimicrobial Resistance: Some Guidelines for the Practitioner

- *Paul Innes, Veterinary Science, and Kim Klotins, Antimicrobial Specialist, OMAF, Marie Archambault, Animal Health Laboratory, University of Guelph*

Antibiotic-resistant Salmonella are problematic. They may persist in the host or environment in the absence of antibiotics, and they act as reservoirs of resistance genes for other Salmonella, other gram-negative bacteria, including commensals, and for Staphylococci. In addition, they cause severe human health consequences and significantly limit the treatment options for patients with bacteremia, meningitis and other extra-intestinal Salmonella infections. For these reasons, antimicrobial resistance is now considered a unique microbiological hazard in HACCP programs related to food safety and drug approvals (Greenless, 2003).

Guidelines for the Clinician in Selecting an Antimicrobial

General guidance for treatment of specific bacteria with a specific antimicrobial in a given species can be found in the *Target Antimicrobial Reference Guide (Canadian version) 2nd Edition* by Dr. David Aucoin, published by North American Compendiums Inc. (1-800-350-0627). Generally, the clinician can expect susceptibility results for these antimicrobials to reflect clinical outcome; i.e. treatment will not be effective if the Salmonella is resistant to the drug.

The Veterinarian's Responsibilities

While Salmonella on farms is not a new issue, the problem of multidrug resistance is growing. Practitioners should be aware of the significance of finding or suspecting Salmonella infections, and take the appropriate steps.

- Consider symptomatic treatment only (fluids and antipyretics) and use a narrow spectrum antibiotic as the first drug of choice in cases where antibiotic treatment is indicated. Base final treatment decisions on the results of culture and susceptibility testing. Although cost, convenience and clinical efficacy are important considerations, antibiotic selection and prescribing patterns should always follow the prudent-use principles developed by the Canadian Veterinary Medical Association (available in .pdf format from the CVMA at www.canadianveterinarians.net/pdfFiles/AMRGuidelines.pdf).

- Farm employees and family members should be advised that Salmonella can cause disease in humans. Raw products from infected animals, potential carriers and herd mates should not be consumed. Any individuals exhibiting signs of enteric disease should be directed to contact their family physician immediately. Information regarding Salmonellosis on the farm, including sensitivity results, should be provided to the family physician.

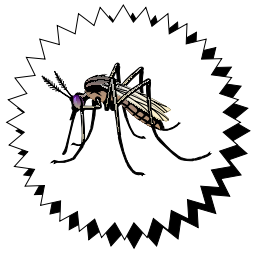
- Hygiene, sanitation, and restricted movement are important factors in reducing the risk of importing or spreading Salmonella. Biosecurity procedures should be reviewed, particularly with respect to new additions. Dead stock should also be disposed of appropriately (see *Managing On-farm Mortalities*, CEPTOR July 2003).

Persons interested in the full text of this article can find it at: www.gov.on.ca/OMAF/english/livestock/index.html, Veterinary/Public Health, Disease Surveillance/Public Health, or contact Dr. Paul Innes, Veterinary Epidemiologist, OMAF, (519) 846-3407 or paul.innes@omaf.gov.on.ca

Greenless KJ. Animal drug human food safety toxicology and antimicrobial resistance – the square PEG. International Journal of Toxicology 2003; 22: 131-134.

West Nile Virus and Eastern Equine Encephalitis Virus Update

Paul Innes, Veterinary Science, OMAF



West Nile virus (WNv)

As of October 10, there have been 10 confirmed or probable equine cases of WNv in Ontario, based on the diagnostic tests performed and the presence of clinical signs consistent with the disease. OMAF defines a confirmed case as one with clinical signs and a positive result from IgM ELISA, Polymerase Chain Reaction (PCR) or immunohistochemistry (IHC), or demonstrating a 4-fold or greater increase in IgG titre from acute and convalescent sera. In comparison, Health Canada (HC) reports all positive test results received from diagnostic laboratories as required under the *Health of Animals Act*, both confirmed and presumptive. Of the 42 positive results reported to date, most have been on single IgG ELISA tests without a positive IgM ELISA or a history of clinical illness, and are classified by HC as presumptive. These may be attributable to vaccination or exposure in 2002.

Overall, virus activity in Ontario has been lower than what was experienced by this time last year. This trend has also been seen in American jurisdictions that experienced significant WNv activity in 2002. The most activity so far in 2003 has been in those states and provinces along the leading edge of the virus' range, such as Saskatchewan, Alberta and Colorado. Weather, awareness, widespread equine vaccination and natural immunity in vector and host populations may have contributed to the reduction in virus activity.

Eastern Equine Encephalitis (EEE) virus

This year, EEE virus infections were detected earlier and in greater numbers than usual in the southern US, indicating this was to be a particularly bad year. OMAF, as a partner in the Ontario Animal Health Surveillance Network, alerted veterinarians in July to the possibility of increased EEE activity in 2003. As of October 10, there have been 11 confirmed and probable cases of EEE in Ontario. The majority of cases have occurred in Eastern Ontario, particularly Lanark County, and in Simcoe County. Cases have also been reported from Northumberland County and Manitoulin Island. The number and distribution of EEE cases in Ontario are unusual.

The disease has been identified sporadically in mostly unvaccinated horses, either residing in Ontario or acquired while traveling through other areas of North America. Like WNv, EEE is spread by mosquitoes that feed on both birds and mammals. While the ecology and epidemiology of EEE in Ontario is still largely unknown, the primary mosquito vector is thought to be associated with swampy areas, and outbreaks of the disease in horses are often localized to a particular area.

The clinical presentation of EEE is similar to other arboviral encephalitides, and is indistinguishable from rabies or WNv. Fever and mild depression are typically observed initially, followed by signs of diffuse encephalitis (ataxia, erratic behaviour, recumbency, cranial nerve deficits). The case fatality rate is 80-90% and there is no treatment beyond supportive care. Death often occurs within 48-72 hours. Several of the cases seen this year have been of acute onset and rapid progression to death or euthanasia within 24 hours, similar to what was experienced with WNv in 2002.

Diagnostic Testing for WNv and EEE

Rabies should be ruled out first, taking the usual precautions. If rabies has been ruled out or is unlikely, horses with acute encephalitis should be tested for WNv and EEE. The Animal Health Laboratory, University of Guelph, provides IgM ELISA serology, immunohistochemistry

(IHC) and Polymerase Chain Reaction (PCR) testing for WNv; if negative for WNv, acute and convalescent sera will be forwarded to CFIA for EEE. Please remember to submit sufficient sera for multiple tests. Unfortunately, diagnosis of EEE is often based on histological lesions in the brain, with PCR confirmation. **Diagnostic testing is critical for detecting the emergence of locally rare diseases, such as EEE. If all encephalitic horses are assumed to be infected with WNv and not tested, emergence of EEE in Ontario may be missed**.

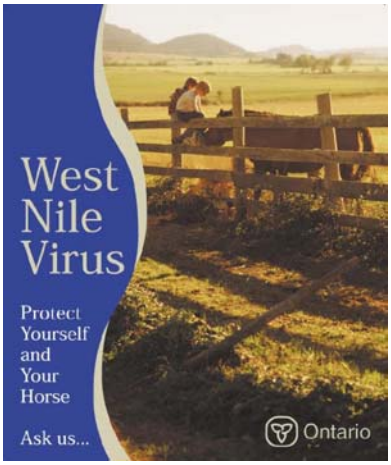
Prevention
Vaccines are available for both WNv and EEE. It is highly recommended that horses traveling to affected areas in the United States be vaccinated against EEE. The risk of EEE in Ontario is low, but vaccination should be considered. The EEE vaccines generally provide protective immunity for 4-6 months, so boosters should be administered in the spring at the same time as the WNv vaccine.

More information on these diseases and their prevention is available on the OMAF web site:

EEE: www.gov.on.ca/OMAF/english/livestock/horses/health.html
WNv: www.gov.on.ca/OMAF/english/livestock/horses/westnile.htm

Summary of Equine WNv in Ontario - 2002

Paul Innes, Veterinary Science, OMAF



Laboratory Surveillance
Reports of equine cases of WNv began in late August of 2002 in the regions of Essex, Niagara and Hamilton-Wentworth. By the end of September, cases had been reported in Haldimand-Norfolk, Chatham-Kent, Lambton, the Greater Toronto Area (GTA), Brant, Waterloo, Wellington, Oxford, Perth, Ottawa, and Rainy River. A case from Parry Sound-Muskoka was reported in mid-October. Cases ranged, based on the date of sample collection and submission, from August 19 (Essex) to November 19 (Waterloo).

A total of 107 confirmed or probable cases were reported from 17 Health Unit regions. The majority of cases occurred in Essex, Niagara and Haldimand-Norfolk. The actual number of cases is estimated to be 4-5 times greater, based on the results of a questionnaire sent to veterinarians at the end of 2002. Diagnostic samples were not collected in many instances due to cost, delays in getting results, and the often rapid progression of clinical disease. By mid-September, many veterinarians had become familiar with the clinical presentation and were confident in making a presumptive diagnosis without laboratory diagnostic testing.

Data from the Animal Health Laboratory (AHL), University of Guelph, indicate an overall fatality rate of 48% in cases for which an outcome was known (30/62). This value is likely inflated by the over-representation of mortality investigations by the AHL. Of the cases diagnosed by serology alone, 92% (11/12) survived.

Targeted Surveillance
A serologic survey of Ontario horses was conducted to assess exposure to WNv in 2002, using a non-random sample of unvaccinated horses obtained from several racetracks and from private veterinarians throughout the province. Exposure to WNv was assessed using an IgG ELISA test (Prairie Diagnostic Services, Saskatoon, SK) to detect antibodies to the virus. Results indicate an overall seroprevalence of 6% (95% confidence intervals: 4.3,7.9). The prevalence was highest in the Niagara-Haldimand-Norfolk and Essex-Kent-Lambton regions and the GTA, and

lowest in the East and Central-North regions (**Table 1**). This pattern is consistent with the results from reported cases and the practitioner questionnaire. Approximately 7% (3.8,10.6) of all premises tested had at least one positive result.

Clusters of exposure were detected at several racetracks and some large horse farms throughout southern and eastern Ontario. The prevalence among horses stabled at racetracks was 11.6%, compared to 4.2% among farm-stabled horses. Other studies have found a higher prevalence among horses on pasture, presumably due to a greater exposure to mosquitoes at dawn and dusk (NY State Dept. of Agriculture and Markets, pers. comm.). These results may reflect the unique risk situation presented by racetracks, such as large concentrations of birds, horses, and mosquito breeding sites.

Based on an estimated horse population of 320,000 in Ontario (Wright, OMAF), as many as 25,000 horses were infected with WNv in 2002. If the number of clinical cases is estimated to be no more than 500, then the rate of disease in infected horses can be estimated to be less than 2%.

Table 1: Results of Ontario WNv Seroprevalence Study by Region

Region*	% Prevalence (95% CI)	Sample Size
Southwest	7.1 (0,16.1)	42
Southcentral	4.7 (1.0,8.4)	149
Eastern	2.9 (0,7.6)	69
Southern	8.9 (4.1,13.6)	158
GTA	9.8 (4.9,14.6)	164
Central-North	1.9 (0,4.3)	159
Overall	**6.1 (4.3,7.9)**	**741**

*Regions were divided as follows:

Southwest - Essex, Lambton, Kent
Southcentral - Middlesex, Elgin, Oxford, Wellington, Waterloo
Eastern - Frontenac, Lanark, Leeds-Grenville, Lennox-Addington, Ottawa-Carleton, Prescott-Russell, Renfrew, Stormont-Dundas-Glengarry, Northumberland, Prince Edward, Victoria
Southern - Niagara, Haldimand-Norfolk, Hamilton-Wentworth, Brant
GTA - Toronto, Peel, Halton, York, Durham, Dufferin
Central-North - Grey, Bruce, Perth, Simcoe, Peterborough, Parry Sound-Muskoka, Haliburton, Northern Ontario

Response for 2003

Education efforts have targeted the regions of highest prevalence, and vaccination uptake in these areas has been encouraging. Information sheets, *Controlling Mosquitoes on Horse Farms and Rural Properties*, have been developed and distributed to the rural community and horse industry.

Appendix I: Case Definition

A confirmed case was an equine with clinical signs consistent with WNv infection and one of the following: positive on PCR or immunohistochemistry (IHC), an associated fourfold or greater change in Plaque Reduction Neutralization Test (PRNT) antibody titer to WNv in appropriately timed, paired sera; or detection of both IgM antibody to WNv by MAC-ELISA and an elevated titer (positive at >1:10) to WNv antibody by PRNT in a single serum sample.

A probable case was an equine with clinical signs consistent with WNv infection and detection of IgM antibody to WNv by MAC-ELISA but no elevated titer (negative at 1:10) to WNv antibody by PRNT in a single serum sample taken <21 days after onset of illness.

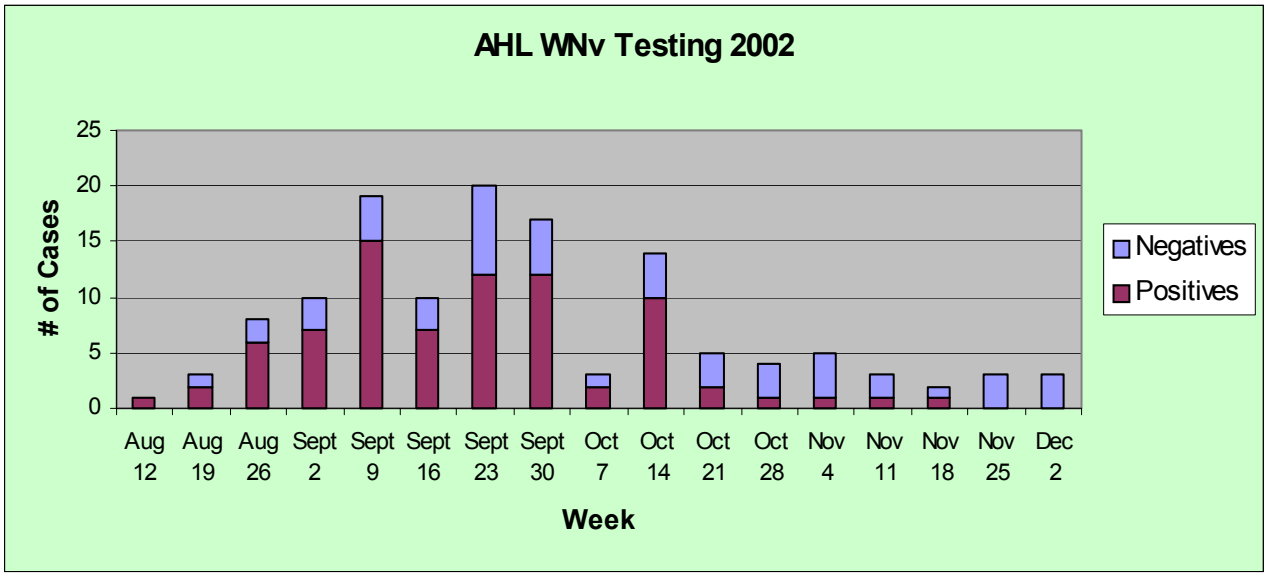
These definitions were consistent with the USDA guidelines given to American states for reporting.

Appendix II: Surveillance Data Collection

WNv was not a reportable disease in 2002. As such, veterinarians and diagnostic laboratories were not obligated to report cases of WNv to OMAF or the Canadian Food Inspection Agency (CFIA). Case numbers were obtained by monitoring submissions through the Animal Health Laboratory at the University of Guelph, and from diagnostic labs in Michigan and Winnipeg. WNv is now an *Immediately Notifiable* disease, meaning diagnostic laboratories must report positive diagnoses to the CFIA. For 2003, this is being arranged as a weekly report. Data will be forwarded to the Provincial Veterinarians for public health reporting purposes.

***Appendix III*:**

WNv Case Submissions to the Animal Health Laboratory and the Proportion of Positive Diagnoses (by IHC, PCR, IgM ELISA or PRNT)



Moving Quickly Toward a National Animal Identification System

Adapted from the *Swine Health Report*, National Institute for Animal Agriculture, Summer, 2003. *Tim Blackwell, Veterinary Science, OMAF*

The threat of bioterrorism, the economic consequences in Canada of a single case of BSE, and concerns over food safety have driven state animal health officials, livestock industry groups and the United States government to move quickly toward establishing a national animal identification plan. The first phase of this initiative, Premise ID, is scheduled to be operational by July 2004. Premise ID requires that all livestock production facilities, markets, assembly points, exhibitions and processing plants be assigned a unique premise identification number.

Phase 2 is to be in place by the beginning of 2006. This phase requires individual identification of all cattle in commerce. Other livestock species would require either individual or group/lot identification.

Some European countries have already established national animal identification systems. In addition to the concerns stated above, there is the possibility that existing animal identification systems could be used as technical trade barriers in the absence of an actual exotic disease outbreak or food safety threat. Canada is also pursuing national animal identification strategies. It is likely that, in the foreseeable future, the identification and movement of livestock within many countries will be better documented than the corresponding information on the human population.

The "Off-label" Use of Formaldehyde!

John Martin, Veterinary Science, OMAF

Recently, there have been reports of the "off-label" use of formalin (formaldehyde solution), of unknown strength, to shrink subcutaneous abscesses in goats. Apparently, this is a treatment recommended by an American producer (not a veterinarian) on his web site, and also used by some producers in southern Ontario. In Canada, this is an illegal use of formaldehyde!

Formaldehyde solution 37% is a controlled substance under the federal *Pest Control Products Act*. It is illegal to use a controlled product in any way other than that described on the label. The only label claims for this solution are: for the fumigation of livestock facilities, used in conjunction with potassium permanganate OR, as a 1:20 solution, for the spraying or scrubbing of buildings and equipment, such as refrigerators. There are very clear instructions on the label as to how it should be used, plus a very precise warning that contact with the solution, or vapour from it, is very irritant to skin, eyes, nose and throat and can be absorbed through any body surface. Medical attention should be sought after such contact.

By injecting into an abscess, formaldehyde is being introduced into the body; if the abscess is a caseous lymphadenitis lesion in a lymph node, the chance of absorption is even greater. As formaldehyde is a known carcinogen, milk or meat from such a treated animal should never be used for human consumption. From the animal welfare perspective, this treatment is, most probably, very painful.

Do not recommend this illegal practice.

November Sheep Seminars

"Market Lamb Production - Producing Profitable Carcasses"

This seminar will focus on the farm management aspects of producing market lambs. The emphasis will be on the management factors that affect the profitability of market lamb production. Cost is $40.00, which includes lunch and proceedings.

Program is from 9:00 a.m. – 3:30 p.m. Pre-Registration Deadline – November 14, 2003

Tuesday, November 18, 2003 - Atwood Community Centre
Thursday, November 20, 2003 - New Location - Selby Community Centre, near Napanee, but north of Hwy. 401

Register Now!

Call 1-877-424-1300 or (519) 826-4047 or visit the OMAF web site for complete details
http://www.gov.on.ca/OMAF/english/livestock/sheep/confrnc.htm

Ministry of Agriculture and Food

Ontario Sheep Marketing Agency

University of Guelph

Roundworm Control: Is it Working?

Tim Blackwell, Veterinary Science, OMAF

Roundworm (*Ascaris suum)* infections are endemic on most Ontario swine farms. A diagnosis of roundworm infections is done by either fecal flotation, observing adult worms in the stool, or by the presence of milk spots on the livers of pigs at postmortem or at slaughter. The most appropriate method to diagnose infection depends on pig flow and farm management. All three diagnostic methods have the potential to produce false negative results.

Strategic deworming programs will prevent roundworms from reaching sexual maturity, thereby eliminating eggs in the feces. However, previously excreted *Ascaris suum* eggs can persist in the environment for seven years or longer. Therefore, it is possible to have new non-patent infections in herds that use anthelmintics appropriately but lack strict attention to hygiene. In these herds, no eggs will be seen on fecal examination; however, milk spots may be observed on the livers and juvenile adults may be seen in the feces following deworming.

The interpretation of milk spots on livers depends on pig flow, anthelmintic use, and the pigs immune response to challenge by ascarids. White spots occur in the liver of pigs around one week after a single exposure to infective larvae and generally resolve two to three weeks later. In pigs that are continuously exposed, milk spots peak around six to nine weeks after the first exposure to larvae and then decline over the next month, possibly due to the development of pre-hepatic immunity.

Two farms can be compared to demonstrate the subtleties involved in interpreting the presence or absence of milk spots in slaughter swine. In a 3-site production system with good hygiene and routine use of anthelmintics in the first 2 sites, milk spots can be dramatic if the pigs are naïve when first exposed to infective roundworm larvae in mid to late finishing. By contrast, in a continuous-flow production unit with less stringent hygiene and non-regular use of anthelmintics, early development of pre-hepatic immunity to ascarids may lower the prevalence of white spots in the livers of market hogs despite strong infection pressure.

Therefore, when large percentages of livers are condemned at slaughter, one should suspect a late infection of naïve pigs in the finishing barn. When condemnation rates are low, there are two possible explanations: roundworm infection and subsequent immunity were established early in the production cycle and affected livers healed or appropriate hygiene and anthelmintic use have successfully controlled infection in the pigs.

Good sanitation throughout the production cycle, combined with strategic deworming practices can greatly reduce, and occasionally eliminate, roundworm infection from a swine farm.

Fall cleanup!

Winter will soon be here.

Be aware of road conditions and stay safe.

Continuing Education/Coming Events

Nov. 13 - 15, 2003	Central Canadian Veterinary Association-Annual Fall Conference, Ottawa, Contact Dr. Andrew Sparling (613) 826-3456
Nov. 18, 2003	Market Lamb Production - Producing Profitable Carcasses, Atwood Community Centre. Contact 1-877-424-1300 or (519) 826-4047 to register. www.gov.on.ca/OMAF/english/livestock/sheep/confrnc.htm (*See page 12*)
Nov. 18 & 19, 2003	Penn State 2003 Dairy Cattle Nutrition Workshop. www.das.psu.edu/dcn/workshop/dcn2003/brochure.htm
Nov. 19, 2003	Nutrient Management; And Now… the Rest of the Story, Shakespeare Community Centre. Contact Mary Van den Borre (519) 846-0941 or mary.vandenborre@omaf.gov.on.ca
Nov. 20, 2003	Market Lamb Production - Producing Profitable Carcasses, Selby Community Centre. Contact 1-877-424-1300 or (519) 826-4047 to register. www.gov.on.ca/OMAF/english/livestock/sheep/confrnc.htm (*See page 12*)
Nov. 29, 2003	Dialogue on Equine Nutrition, Lifetime Learning Centre, Ontario Veterinary College. Contact (519) 824-4120 ext. 53862, e-mail: mprosser@open.uoguelph.ca
Dec. 5 - 6, 2003	Lifelearn Inc. - Laser Surgery, Ontario Veterinary College, 1-800-375-7994 or www.lifelearn.com
Dec. 8 - 11, 2003	Dairy Herd Improvement Herd Management Conference Contact 1-800-549-4373 or www.ontariodhi.com
Jan. 17 - 21, 2004	North American Veterinary Conference, Orlando, Florida, 1-800-817- 9928, Fax: (352) 336-6827, e-mail: info@tnavc.org www.tnavc.org/navc2004/main.htm
Feb. 5 - 7, 2004	Ontario Veterinary Medical Association Annual Conference, Ottawa Congress Centre, Ottawa. www.ovma.org/
Feb. 19 - 21, 2004	Ontario Association of Veterinary Technicians 26th Annual Conference and Trade Show, Double Tree International Plaza Toronto Airport (formerly International Plaza Hotel), Toronto. www.oavt.org/febconference.htm
March 18 - 21, 2004	Can-Am All Breeds Equine Emporium, Western Fair Grounds, London. Contact (519) 421-1189, e-mail: canamequine@bellnet.ca, www.can-amequine.com/
July 11 - 16, 2004	23rd World Buiatrics Congress, Quebec City Convention Centre. www.wbc2004.ca

CEPTOR feedback form

Please add our clinic to your mailing list. ☐ Please change our clinic address. ☐

Our clinic has more than four practitioners and we would like to receive more than one copy of CEPTOR.

We have ____ practitioners in our clinic and would like to receive ___ copies of CEPTOR.
(*Indicate #*)

Clinic name: . . . . . .

Practitioners: . . . . . .

Mailing address: . . . . . .

. . . . . Postal Code. . . . . .

Tel.: . . . . . Fax: . . . . . E-mail: . . . . . .

Please return this form with your comments to:

Kathy Zurbrigg, Veterinary Science, Ontario Ministry of Agriculture and Food

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: . . . . . .

. . . . . .

. . . . . .

. . . . . .

. . . . . .

Deadline for next issue: January 30, 2004

Ontario
Ministry of Agriculture
and Food

Veterinary Science
2nd Floor, Wellington Place
R. R. #. 1, Fergus, Ontario
N1M 2W3