

# CEPTOR



**Animal Health News**  
Volume 10, No. 3, September 2002

ISSN1488-8572

## **Zoonotic Diseases Will Become More Important in Swine Practice**

*Tim Blackwell, Veterinary Science, OMAF*

Changing swine production practices have presented swine veterinarians with continuous challenges in swine medicine. Economically important diseases, the traditional production diseases, involved pathogens that caused health problems in pigs such as pneumonia, diarrhea or reproductive failure. Veterinarians have many tools to address these types of diseases and to prevent them from being introduced onto swine farms. However, a new group of diseases is now gaining importance in swine production medicine.



An emphasis on on-farm food safety is raising zoonotic diseases to a level of importance equal to or surpassing that of the traditional production diseases. We may soon find ourselves more concerned about treating, eradicating, and preventing human pathogens on swine farms than we ever have been in the past. The prevention of infections such as trichinosis, toxoplasmosis, salmonellosis and others, could become increasingly important in swine production. Although these pathogens do not commonly affect average daily gain or feed efficiency, they have the potential to negatively impact the profitability of swine production as much or more so than traditional production diseases. An outbreak of human illness associated with pork or pork production would likely have major negative consequences for the pork industry.

Recent emphasis and improvements in technology that allows the traceback of individual animals, or even cuts of meat, to the farm of origin will have two effects. Traceback will greatly increase liability for producers and veterinarians responsible for the health of the pigs on the farm. It will also rapidly focus producer and veterinary attention on the control of zoonotic diseases.

Some zoonotic diseases such as trichinosis have essentially been eliminated through modern production practices. Other diseases such as toxoplasmosis are assumed to be relatively rare in modern swine production although accurate data on the prevalence of this organism in swine is difficult to obtain.

To date, the control of salmonellosis in pig production units has been primarily focused on the relatively rare occurrence of clinical salmonellosis in  
*(continued on page 3)*

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Zoonotic Diseases Will Become More Important in Swine Practice .....	1
CEPTOR Copyright Information .....	2
Diagnosing Goat Milk Quality Problems .....	3
Update on Sulfas and Rendering .....	4
Composting Dead Animals .....	5
Sulfa-containing Veterinary Drug Products (approved for sale in Canada) .....	6
Calf Vaccination Programs Predict Feedlot Health .....	7
Source Qualified Ontario Calves .....	8
Shared Responsibility .....	9
Welcome Babak .....	9
Report from the Animal Use of Antimicrobials Expert Committee .....	10
Estradiol Benzoate - Extra-label, but Worth It? .....	11
Bovine Milk Culture Results for Mycoplasma, January 1999 to June 2002 .....	12
The Use of Pooled Fecal Samples for the Detection of Johne's Disease .....	13
Accreditation Status .....	13
Chronic Wasting Disease Update to September 15, 2002 .....	14
Vets Are (In) Credible .....	16
Horse Medicines - their Use and Contraindications .....	17
Horse-Medication Inventory Form .....	19
Communicating Disease Alerts to Practitioners .....	20
Managing Flock Expansion "Building Blocks for Productive Flocks" .....	20
Johne's Disease Beef Project Postponed .....	21
Got Cystic Ovaries? .....	21
Continuing Education .....	22
<b>CEPTOR</b> Feedback Form .....	23

**CEPTOR is published by:**

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(continued from page 1)

swine. However, salmonella bacteria can and often do reside in the intestine of pigs without producing clinical disease. Methods for the eradication of subclinical salmonellosis in swine are a major area of research world-wide. Salmonellosis eradication appears difficult at this time but will likely involve the combined efforts of producers, veterinarians, feed companies, truckers, and slaughterhouse personnel.

Pork producers, swine veterinarians, and pork processors work diligently to provide a safe and wholesome product for consumers. Efforts to control and eradicate zoonotic diseases will become of increasing concern to our profession, our clients, and ultimately consumers in the future. The sentinel herd project at the University of Guelph, which involves the testing of pigs on approximately 100 Ontario swine farms for zoonotic pathogens, will help establish baseline values for some of the zoonotic diseases of greatest concern. This will provide one starting point for efforts to control and eradicate these “non-production” diseases.

## **Diagnosing Goat Milk Quality Problems**

*Tim Blackwell and Ann Godkin, Veterinary Science, OMAF*

This past summer, we received more than the average number of calls from veterinarians regarding problems with high bacteria counts in goat milk. Finding the cause for these high counts has been challenging for practitioners because many calls were from producers who do not routinely work with their veterinarian to address goat health and productivity issues. Diagnosing the cause of high bacterial counts in milk in a minor species, in a herd in which you do not have a routine working relationship, is challenging. Understanding that high bacteria counts in goat's milk bulk tanks tend to occur for the same reasons as in dairy cattle is important.



Goat producers have received letters from the OMAF Food Inspection staff describing a program for the testing of goat's milk that is underway this September. You can get more information about this project from Brenda Norris (519) 826-4684 or [brenda.norris@omaf.gov.on.ca](mailto:brenda.norris@omaf.gov.on.ca). The letter also contains a factsheet and some suggestions about changes that can be made to improve the bacterial quality of goat's milk.

As with cows, high bacterial counts in dairy goat's milk are not often caused by mastitis. High bulk tank bacteria counts are most often caused by too many bacteria entering the milk from the environment or by inadequate cooling of the milk during storage. Bacteria can enter milk from any surface the milk comes in contact with after it leaves the goat's udder. Every possibility for contamination of the milk by environmental bacteria needs to be explored and corrected where breaches in hygiene are identified. This includes cleaning and disinfecting the udder and teats prior to milking, regardless of how clean they look, as well as proper cleaning and sanitation of milking equipment, transfer lines and storage tanks.

Although very low bacteria counts are attainable, it may be impossible to completely prevent any bacteria from entering milk on a dairy farm. Low level contamination (a plate loop count less than 20,000 CFU/ml) will not cause milk quality problems. However, even low numbers of bacteria can become a problem when they get a chance to multiply during storage because of inadequate cooling. Then milk quality problems do occur.

Most dairy goat herds store milk on the farm seven days – longer than the 48 hours of storage on a dairy cow farm. This longer storage time can become a time of significant risk of elevated plate loop counts if the required storage temperatures (1 to 4°C) are not achieved. It is important that milk be cooled to below 4°C within two hours of milking. Adequate and rapid cooling is a problem for some farms during extended summer heat spells.

High bacteria counts in dairy goat milk and rejection of this milk by the processor are disappointing for the industry but provide a golden opportunity for veterinarians to become involved as trouble-shooters. You can tackle this problem just as you would for a dairy cow herd. You can assist producers to obtain good information on the likely sources of these bacteria. While milking equipment service may not be part of your veterinary practice, you can encourage producers to get equipment function, and the adequacy of cleaning, professionally assessed. You can also teach proper udder preparation (using a disinfectant and an individual cloth or paper towel to remove contamination from every teat on every goat prior to milking). Just because teat skin looks clean, it doesn't mean that it can't be contributing bacteria to the bulk tank milk.

And while you have the goat milk producer's attention, you may have an opportunity to address general udder health in the herd and to examine does for mastitis. A combination of clinical examination and use of the California Mastitis test (CMT) can help identify does that are likely candidates for culture. Udder halves with CMT scores of T (trace) or 1 are likely uninfected, while those scoring higher have a much greater probability of infection. CMT's work well in dairy goat herds because they are "goat-side", provide a result for each half, and give immediate results. Although not used as extensively in goat herds as in cow herds, somatic cell counts (SCCs) done on the Fossomatic machine run by DHI, are a good way to rapidly and routinely measure udder health.

While the areas to emphasize when solving high bacteria counts in goat's milk remain milking equipment cleaning, milk cooling and clean milk contact surfaces, veterinarians can assist dairy goat herd owners to improve udder health and overall milk quality. Ensuring high quality goat's milk will keep this industry viable.

## **Update on Sulfas and Rendering**

*Ann Godkin, Veterinary Science, OMAF*

Rothsay rendering (a division of Maple Leaf) renders virtually all dead livestock in the province. Some of this material becomes meat and bone meal (MBM) that is sold for feeding non-ruminants. Because the rendering process does not break down sulfa products, particularly sulfamethazine (SMZ), they can contaminate the animal feed produced. Rendering may even concentrate the inhibitor as the material is dried. Contaminated MBM fed to hogs could produce pork with sulfa residues. Rothsay, therefore, wants no animals treated with sulfas to enter the rendering stream.

While there are six or seven main sulfa products used in animal production, far and away the most commonly used sulfa is SMZ. SMZ is used to treat hogs, veal calves and feedlot cattle.

Beef producers are less aware of residues issues around the use of SMZ than pork producers. Pork has had a SMZ test and follow-up program run by the provincial government for over 20 years. Some beef feedlot owners may be unaware that they are feeding a ration with SMZ in it.

SMZ is an over-the-counter (OTC) product and may be added at the recommendation of a feed mill or by owner request. Veterinary practitioners may not be made aware that it is being fed, especially with clients that they see infrequently and only for occasional individual animal treatment. Producers often use the same ration for many years without change if they believe it works and may not be aware nor remember that SMZ is included. As calves enter feedlots this fall, the inclusion of SMZ or a change to an alternative, might be a point to discuss.

Sulfas other than SMZ are used less broadly. Often only individual sick animals are treated with sulfa-containing injectables or boluses. These animals are more likely to be identified as “sulfa-treated.”

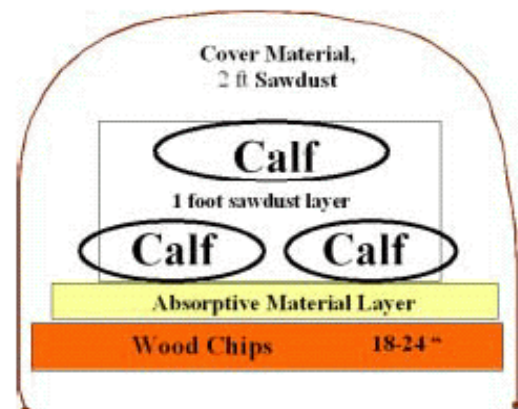
SMZ persists “like plastic.” This feature, combined with its widespread use, makes SMZ responsible for the greatest proportion of the sulfa residues detected in a testing survey conducted by Rothsay. For many years, SMZ has been the compound frequently targeted in regulatory testing programs.

Producers can continue to use SMZ and other sulfa-containing products provided they understand that under the Dead Animal Disposal Act in Ontario they must dispose of animals that die. Rendering, via Rothsay, is not available for those animals that die before the meat withdrawal time for the sulfa product has elapsed. Rothsay’s customers do not want material from sulfa containing animals. Disposal options for dead sulfa-treated animals, therefore, are limited to burial or composting.

## Composting Dead Animals

*Ann Godkin, Veterinary Science, OMAF*

Producers continuing to use sulfamethazine and other sulfa-compound products will not be able to have dead stock collectors pick up those animals that die before the withdrawal time is up. According to the provincial *Dead Animal Disposal Act*, it is the producer’s responsibility to dispose of these mortalities by either burial or composting within 48 hours of death. You may want to find out more about composting, as it may become a topic of discussion.



*J. Craig Williams, Penn State Cooperative Extension  
Lee Telega, PRO-DAIRY, Cornell University*

Some helpful resources on composting for you or your clients include:

- Composting Livestock Mortalities, OMAF Factsheet by Morris, O’Connor and Kains. [www.gov.on.ca/OMAF/english/livestock/sheep/facts/97-001.htm](http://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 Bonhotal, Telega and Petzen. [www.cfe.cornell.edu/wmi](http://www.cfe.cornell.edu/wmi) or call (607) 255-1187.
- Field Guide to On-farm Composting. NRAES publication #114 by Dougherty. This one is a 118-page booklet and covers everything in an exceptionally usable format. To order refer to [www.nraes.org](http://www.nraes.org) or call (607) 255-7654. There are additional resources on the NRAES site.
- Cow Mortality Disposal (AG-507) by Bagley, Kirk and Farrell-Poe. <http://www.ext.usu.edu/publica/agpubs/ag507.pdf>.

The website that introduces it: <http://www.ext.usu.edu/publica/agpubs.htm>

If you can’t access these easily, please give us a call.

## Sulfa-containing Veterinary Drug Products

(approved for sale in Canada)

Gary Koebel, *Livestock Mortality Specialist, OMAF*

The following list of sulfa-containing veterinary drug products was compiled from the *Compendium of Veterinary Products*, Seventh Edition, 2001.



Trade Name	Manufacturer/ Distributor	Trade Name	Manufacturer/ Distributor
2 Sulfamed	Medprodex	S-M-T	P.V.U.
3-Sulvit	A.P.A.	Sodium Sulfamethazine 25%	Citadel
After-Calf Bolus	Dominion/P.V.L.	Sodium Sulfamethazine	
Astringent Powder	Bimeda-MTC	Solution 12.5%	Dominion
Aureo S®-700		Sodium Sulfamethazine	
Beef Cattle Vitamin		Solution 25%	Dominion
Premix Crumbles	Alpharma	Sulectim* 100	Equivet
Aureo S®-700 G	Alpharma	Sulectim* Plus	Equivet
Aureo SP 250® G	Alpharma	Sulfa "25"	P.V.L.
Aureomix® 625 G	Alpharma	Sulfa 2 Soluble Powder	Dominion
Aureo-Sulfa-Vit	V-S Feed & Agri Supplies	Sulfa 25%	Bimeda-MTC
Bimotrim™ Injection	Vetrepharm	Sulfalean® Powder	Bimeda-MTC
Borgal®	Intervet	Sulfamethazine Bolus	Dominion/P.V.L.
Calf Scour Bolus	P.V.L.	Sulfa-MT	A.P.A.
CalfSpan*	Pfizer	Sulfa-Plus	P.V.U.
Chlor 250	Bio Agri Mix	Sulfaquinoxaline	
Chlorosol-250	A.P.A.	19.2% Liquid Concentrate	Dominion
Chlor-S-700	Bio Agri Mix	Sulfaquinoxaline-S	Medprodex
Cocci Bol-O-Tab® Jr.	Intervet	SulfaSURE™ SR	Boehringer
Cocci Bol-O-Tab® Sr.	Intervet	Sulfavite	Dominion
Co-op® Calf Scour Tablets	IPCO	Sulmed Plus	Medprodex
Enterolyte	Bimeda-MTC	Super Chlor 250	Bio Agri Mix
Kaobiotic® Bolus	Pharmacia Animal Health	Super Chlorosol-250	A.P.A.
Neo Sulfa-E Bolus	P.V.U.	Super Scour Calf Bolus	Dominion
Neorease	Bimeda-MTC	Sustain III®	P.V.U.
NeoSulf Plus	Citadel	Tribrissen® 40% Powder	Schering-Plough
Neo-Sulfalyte* Boluses	Pfizer	Tribrissen® Piglet	
Neutral Sulfa	P.V.L.	Suspension	Schering-Plough
PotenSulf™ Injection	Bimeda-MTC	Tribrissen™ Boluses	Schering-Plough
Powder 21	P.V.L.	Trimidox	P.V.U.
Quinoxine-S	A.P.A.	Triple Sulfa Bolus	Dominion/P.V.L.
Romet®-30 Medicated Premix	Alpharma	Trivetrim™ Injection	Schering-Plough
Scour Bolus Plus	A.P.A.	Tylan® 50/Sulfa-G	Elanco
Scour Suspension	Dominion/P.V.L.		
Scour Treat	Citadel		

\* Registered Trademark



## Calf Vaccination Programs Predict Feedlot Health

*Ann Godkin, Veterinary Science, OMAF*



Over the last 10 years, experiences with Bovine Viral Diarrhea (BVD) have left cattle producers and veterinarians in this province wiser about critical elements of successful vaccination programs. Vaccination works, but you have to do it right.

Vaccinating beef calves against important diseases they will face in the feedlot is a battle between effectiveness and convenience. Often the most convenient time for the producer to vaccinate does not result in the degree of protection needed to keep the calf healthy under stress.

As Dr. Carl Ribble of the Ontario Veterinary College has said, “when vaccine works, nothing happens because nobody gets sick.” Producers therefore are tempted to slip back to a more “convenient” vaccination program. It behooves us as vets and educators to continually evaluate research or cases that prove the importance of the timing of vaccination to convince producers that the extra effort of vaccinating at the right time is really worthwhile.

American researchers assessed the impact of differences in vaccination programs in 24 cow-calf herds on the health of the calves after entry to a feedlot. All calves were processed identically after arrival. All received one shot of modified live virus (MLV) vaccine for IBR, BVD, PI3 and BRSV on arrival. Just prior to vaccination, blood was collected for antibody detection.

There were a great variety of vaccination programs used in the 24 herds. Ten herds used killed vaccines, 9 used MLV and 5 used a combination of MLV and killed. Of the 417 calves, 114 (27%) were treated and 4 (.96%) died. Two were salvaged.

Antibody levels on arrival predicted susceptibility to illness afterwards. For BVD, the 3 herds whose calves had the least illness had high BVD titres on entry (means were 192, 406 and 50) while the 3 herds with the most illness had low titres on entry (means were 0, 5 and 2). Among individual calves, BVD titres not only predicted whether they got sick but also the number of treatments they underwent. Calves not treated at all had a mean titre of 78.5; those treated once had a titre of 74.2; while those treated twice or more had a mean titre of 22.4. Those needing multiple treatments had significantly lower titres at entry from those not treated or treated a single time.

Treatment predicted calf value. Compared to calves never treated, those treated once were worth \$40.64 less; those treated twice, \$58.35 less; and the multiply treated calves returned \$291.93 less.

The 3 herds whose calves had the most illness used killed-virus vaccines but did not give the 2<sup>nd</sup> dose of the primary series at all or gave it within 2 days of delivering the calves to the feedlot. Thus the calves did not have a completed primary series on board for protection when they entered the feedlot and antibody titres were low or non-existent.

The 3 herds with the healthiest calves used the following vaccination programs: one vaccinated the calves with MLV vaccine with the same 4 antigens 7 and 3 weeks before entry; the second used MLV with the 4 antigens 7 weeks before entry; and the 3<sup>rd</sup> used killed vaccine given 6 and 4 weeks before entry.

Proper vaccination programs were associated with protection from disease. One measure of this protection is antibody levels and, in this study, antibody attributed to vaccination on the cow-calf farm, affected disease incidence and calf value in the feedlot. Done correctly, killed vaccine and MLV vaccine programs appear to decrease disease.

Common failures of cow-calf vaccination programs documented in this study and in Ontario include:

- Failure to complete a primary series of killed vaccine consisting of 2 vaccinations given 4 to 8 weeks apart;
- Failure to use the same antigens in initial and subsequent vaccinations;
- Vaccinating calves with either killed or live vaccines before maternal antibody (antibody from colostrum) for the particular antigen has expired. For IBR this is around 4 months; for BVD it is around 6 to 8 months after ingestion, and
- Vaccinating calves within one or two days of entry into the feedlot.

Vaccinating baby calves on the cow or vaccinating calves as they enter or leave a truck for a sale or feedlot is very convenient for the person but very ineffective for the calf.

## Source Qualified Ontario Calves

*Brian Pogue, Beef Improvement Ontario*

Beef Improvement Ontario (BIO), with financial support from the Ontario Cattleman's Association and Canadapt, has initiated a project intended to identify and reward cow-calf producers for reputation calves. The steering committee for Source Qualified Ontario Calves (SQOC) consists of cattlemen and OMAF representatives including: Mike Buis, Brent Cavell, Larry Chanda, Paul Coultres, Wayne Goodfellow, Elaine Graham, James McKinlay, Dennis Schroeder, Ron Woodisee, Don Blakely and Nancy Noecker.



SQOC calves will be identified with orange eartags, which will include the national identification numbers (NLID). The calves must have superior sires to be genetically qualified and follow a standard health protocol consisting of:

1. castration and dehorning completed at least 6 weeks prior to sale (guaranteed).
2. vaccination for IBR, PI3, BVD and BRSV, with the final shot at least 2 weeks prior to sale.
3. vaccination for Pasturella at least 2 weeks prior to sale.
4. vaccination of the cow herd for BVD annually.
5. calves introduced to dry feed (grain or silage) at least 6 weeks prior to sale.

Producers are encouraged to check with their own veterinarian for recommendations on vaccines, timing of vaccination and other health protocols for their specific herd.

Potential buyers will be able to sort groups by sex, weight, breed, etc. on the cattle-log at [www.SQOC.com](http://www.SQOC.com). In the event that a buyer wants additional information on an individual calf, that information will be available on the cattle-log by means of the CCIA number.

For more information on this project, visit [www.biobeef.com](http://www.biobeef.com) or call 1-800-373-2253.



## Shared Responsibility

*Deb Brander and George MacNaughton, Dairy Farmers of Ontario  
and Ann Godkin, Veterinary Science, OMAF*

Dairy Farmers of Ontario (DFO) wants to market only safe, high-quality milk. When DFO is advised of a potential threat to the safety of milk produced on a dairy farm, the precautionary principle is applied and milk is not marketed until there are assurances that the milk from the affected farm is safe for human consumption.



There has been about one incident a year like this over the past ten years. Incidents have included a case of botulism, herbicide accidentally mixed with feed and improper treatment of cattle for parasites. Such incidents can compromise the safety of milk and meat produced on these farms.

Veterinary practitioners are frequently the first to know that an incident has occurred and what causes are under consideration. In situations like this, where the quality of the milk is uncertain until more information is obtained, practitioners can seek help from OMAF's Veterinary Science Group. Additionally, practitioners should strongly encourage producers to contact their local DFO fieldperson or the manager of Field Services for DFO, George MacNaughton, in Mississauga, (905) 821-8970, to inform them of the situation.

The DFO Board has agreed to compensate a producer affected by such a problem for milk withheld from the market while the status of the milk is decided. Payment is made from the time milk discard begins until an official decision is reached regarding the ultimate safety of the milk. Payments during this interval will be based on the estimated volumes of milk and historical composition.

## Welcome Babak . . .

The Ontario Ministry of Agriculture and Food is pleased to announce that Dr. Babak Sanei has joined our Veterinary Science Group as Veterinary Scientist - Poultry Health.

Babak's major initiatives include:

- infectious bronchitis virus surveillance,
- hatchery and supply flock policy and
- disease prevention and biosecurity.



You can reach Babak at the Ontario Veterinary College, where he will add his expertise to that of other researchers at the University of Guelph.

Tel.: (519) 824-4120 ext. 4650 Fax: (519) 824-5930

E-mail: [babak.sanei@omaf.gov.on.ca](mailto:babak.sanei@omaf.gov.on.ca)

## Report from the Animal Use of Antimicrobials Expert Committee

*Paul Innes, Veterinary Science, OMAF*

The report from the *Advisory Committee on Animal Uses of Antimicrobials and Impact on Resistance and Human Health* was released recently. Health Canada established the committee in 1999, drawing on representatives from academia, industry, human medicine and public interest groups. The role of the committee was to provide advice and assistance to Health Canada in the development of policy options related to the animal uses of antimicrobial agents. Based on a review of the scientific literature and consultations with experts from around the world, the committee came up with 38 recommendations. The following six recommendations were deemed the most important by the committee, and are featured in the Executive Summary of the report.

### Major recommendations

1. Make all antimicrobials used for disease treatment and control only available by veterinary prescription.
2. Develop an extra-label use policy that ensures this practice does not endanger human health. Such a policy should include the ability to prohibit the extra-label use of specific drugs deemed to be of critical importance to human health.
3. Evaluate, register and assign a DIN to all antimicrobials used in food animals, whether manufactured domestically or imported. This includes antimicrobials imported in bulk (API), which should be allowed into Canada only under permit. The intent of this recommendation is to stop the direct use of APIs in food animals.
4. Stop the importation, sale and use of antimicrobials not evaluated and registered by Health Canada. The intent of this recommendation is to close the “own use” loophole.
5. Evaluate antimicrobials for growth promotion or feed efficiency using sound risk analysis principles and rapidly phase out antimicrobial claims not fulfilling the following criteria. They must be demonstrably effective, be products rarely, if ever, used in human therapy and not likely to impair the efficacy of any other prescribed antimicrobials for human infections through the development of resistant strains.
6. In consultation with the provinces, other federal agencies and industry groups, design and implement an ongoing, permanent national surveillance system for antimicrobial resistance arising from food animal production. Surveillance should include indicator and pathogenic bacteria isolated from animals, foods and imported animal products.

The full report can be accessed from Health Canada at [www.hc-sc.gc.ca/vetdrugs-medsvet/amr/e\\_policy\\_dev.html#AMR](http://www.hc-sc.gc.ca/vetdrugs-medsvet/amr/e_policy_dev.html#AMR).



## Estradiol Benzoate – Extra-label, but Worth It?

*Ann Godkin, Veterinary Scientist, OMAF*

*Just because we  
can, doesn't  
mean we should!*

Estradiol benzoate continues to be prescribed by Ontario's veterinary practitioners for use in cattle reproduction programs in conjunction with the CIDR (the intravaginal progesterone-releasing device). Estradiol benzoate is a compound that is not licensed for use in cattle in Canada. Practitioners that prescribe this drug must have it compounded by a human or veterinary pharmacy.

Here, in Canada, our privilege as veterinarians, to prescribe hormones for extra-label use continues. In the U.S., prescribing hormones for extra-label use in reproductive programs is illegal.

Veterinarians recommending products for extra-label use are responsible for recommending the appropriate withholding time for meat and milk. Last year there was debate as to the appropriate withdrawal time to observe for animals treated with estradiol benzoate. Recommended withdrawal times on product labels from other countries differ. Frequently the literature to substantiate older labels is lacking. There was little scientific literature on which to base recommendations for withdrawal times for the compound.

Withdrawal times in other countries are based on some established MRL (maximum residue limit or amount allowed) for a compound or its important metabolites. If a product is not approved here in Canada then the MRL is zero. Regardless of what is acceptable in other countries, the withdrawal time established elsewhere under other jurisdictions is not applicable here.

Ontario regulations do not restrict our use of this product. However, we need to carefully consider the pros and cons of this usage. In a recent email, respected past president of the American Association of Bovine Practitioners, Dr. Gatz Riddell of Alabama, makes a point that is true here as well. "Whether or not human health is at risk, and even if very extended withdrawal times are observed, it doesn't really matter if the words "estrogen" and/or "testosterone" and/or "hormone" get included in the headlines with these other words "the meat you eat."

Consumers do not want hormones in food. They buy what we produce. Recommending products like estradiol benzoate for use with CIDRs poses added risk to the reputation of animal products and agricultural production practices. Producers and veterinarians choosing to use extra-label hormonal products, where other on-label products could be substituted, put reputations and privileges on the line.

*Just because we can, doesn't mean we should.*

**HAPPY  
HALLOWEEN**



# Bovine Milk Culture Results for *Mycoplasma*, January 1999 to June 2002

Kathy Zurbrigg, Veterinary Science, OMAF

Many dairy producers have been asking questions regarding the prevalence of *Mycoplasma bovis* in milk. **Table 1** summarizes submissions to the Animal Health Laboratory (AHL) at the University of Guelph for the period from January 1999 - June 2002. Veterinary Science, with the assistance of the AHL, will monitor milk mycoplasma data as part of routine animal health surveillance.



**Table 1. Submissions to the Animal Health Laboratory at the University of Guelph for the Period from January 1999 - June 2002**

	Jan-June 1999	Jul-Dec 1999	Jan-June 2000	Jul-Dec 2000	Jan-June 2001	Jul-Dec 2001	Jan-June 2002
Total number of samples submitted	6	14	5	1	6	28	43
Bulk tank	1	1	0	0	0	2	12
Cow	5	13	5	1	6	24	28
# of Herds Submitting	4	5	4	1	4	12	26
# of Clinics Submitting	4	5	4	1	4	10	19
Other	0	0	0	0	0	2	3
# of Positives	0	0	0	0	0	4	4
Bulk Tank	0	0	0	0	0	0	1
Cow	0	0	0	0	0	4	3
# of Herds with at least 1 positive	0	0	0	0	0	2	4

During the latter half of 2001, milk submissions for *Mycoplasma bovis* isolation started to increase and have continued to rise during the first half of 2002, although the numbers submitted remain very low. The majority of the milk comes from individual cows; however, the submission of samples from bulk tanks is beginning to increase. From July to December 2001, bulk tank samples comprised 7.1% of the total number of samples sent in. From January to June 2002, this number climbed to 27.9%.

In each 6-month block from July 2001 to June 2002, four milk samples were positive. Prior to this time period, no positive samples were isolated from the milk submitted. For the latter half of 2001, two herds, with two positive cow samples each, were found. The positives found in 2002 were from four different herds, with only one of the four samples being from a bulk tank.

With the low number of milk samples submitted for *Mycoplasma bovis* culture, it is difficult to draw conclusions regarding the status of this disease in Ontario. Lab submissions provided little descriptive information regarding the herds or cows involved (e.g., whether positive cattle were “home-raised” or purchased), so preliminary characterization of the disease could not be completed. Currently the prevalence of *Mycoplasma bovis* in milk seems low, however veterinarians and producers should be watchful for this disease.

Currently, milk culture in a lab with experience in mycoplasma, is the only reliable way to identify cows shedding mycoplasma. There are no validated rapid tests for identifying mycoplasma infection in bovine milk.

If samples are to be submitted to the AHL for mycoplasma culture, please note that this is done in a lab separate from the one doing routine milk bacteriology. Samples need to be submitted fresh (preferably at the lab within 24 hours of collection). There is an additional charge for this testing. If you have questions about milk-sample handling and submission please call the mycoplasma laboratory at AHL before collecting samples.

## **The Use of Pooled Fecal Samples for the Detection of Johne's Disease**

*Jocelyn Jansen, Veterinary Science, OMAF*

The use of pooled fecal samples for the detection of *Mycobacterium avium* subspecies *paratuberculosis* (MAP) shows promise for the herd-level detection of Johne's disease.

Fecal samples from 10 dairy cows that shed MAP at various concentrations (light, moderate, high fecal shedders) and 1 uninfected dairy cow (history of no exposure and repeated negative cultures) were used in the study. Each pooled sample contained 1 infected sample and 4 or 9 uninfected samples. Sensitivity of detection of MAP was greater in a pool size of 5 samples versus 10 samples, indicating a dilution effect. Sensitivity was also associated with the concentration of bacteria in the infected sample. Compared with individual fecal samples, the sensitivity of the pooled method was 37% to 44% when the pool contained an infected sample from a light shedder. The sensitivity increased to 94% when the pool contained an infected sample from a moderate or high fecal shedder. The results from this study are in agreement with research performed in The Netherlands by Kalis *et al.*, 2000. (See **CEPTOR** - September 2001).

ELISA testing of the herd or a subset of adult cattle has the advantages of low cost and a rapid turn-around time. However, the test has a low sensitivity in subclinically infected cows (possibly as low as 15%) and less than 100% specificity. Fecal culture has the advantages of increased sensitivity and 100% specificity but at a higher cost and a longer turn-around time. The use of pooled fecal samples would provide the benefit of screening a larger number of animals in the herd for less cost at a comparable test sensitivity to individual fecal culture, thereby increasing the ability to correctly classify a herd.

*Wells SJ, Whitlock RH, Lindeman CJ, Fyock T. Evaluation of bacteriologic culture of pooled fecal samples for detection of Mycobacterium paratuberculosis. AJVR 2002; 63:1207-1211.*

*Kalis CHJ, JW Hesselink, Barkema HW, Collins MT. Culture of strategically pooled fecal samples as a method to screen herds for paratuberculosis. J Vet Diagn Invest 2000; 12:547-551.*

## **Accreditation Status**

*Jocelyn Jansen, Veterinary Science, OMAF*

The diagnosis of bovine tuberculosis in an Ontario dairy herd this past summer has led to a number of inquiries regarding a veterinarian's accreditation status.

A veterinarian is accredited for a 3-year period by the Canadian Food Inspection Agency (CFIA). To be re-accredited or newly accredited, contact your district CFIA office. If you are unsure of your current status, your district CFIA office has access to a list of all accredited veterinarians in Ontario and the tests they are accredited to perform.

## Chronic Wasting Disease Update to September 15, 2002

*Bob Wright, Veterinary Science, OMAF*

Chronic Wasting Disease (CWD) of elk and deer belongs to a group of diseases called transmissible spongiform encephalopathies (TSEs). The emergence of bovine spongiform encephalopathy (BSE) has raised the profile of CWD and other diseases in the TSE group.



CWD is thought to be caused by abnormal infectious proteins known as prions (proteinaceous infectious particles, protease resistant prions, or PrP<sup>res</sup>). A prion is a normal cellular protein involved in synaptic function at the neuron and coded by a single gene. PrP<sup>res</sup> corrupt the normal cellular prion and cause it to become protease resistant. Protease resistant prions (PrP<sup>res</sup>) accumulate and cause vacuolation of neurons and loss of function. Other livestock TSEs include scrapie in sheep, BSE, and transmissible mink encephalopathy. Creutzfeldt-Jakob Disease (CJD) is a disease which belongs to the TSE group and affects humans. A variant form of CJD, called vCJD, is associated with the prion agent causing BSE.

### Regional Distribution

#### *United States*

CWD exists in free-roaming elk, mule deer, white-tailed deer and black-tailed deer in an endemic focus that involves northern Colorado, southern Wyoming and southwestern Nebraska. In the endemic areas of Colorado, approximately 5 per cent of deer and less than 1 per cent of elk are infected with CWD. Recently, officials announced that a mule deer has tested positive for CWD in New Mexico. This is the first case in New Mexico. The deer was found hundreds of miles south of Jefferson County, Colorado (near Denver), previously thought to be the southernmost point of the disease spread.

In **Wisconsin**, three white-tailed bucks were killed in an agricultural region near Madison and tested positive for CWD. This is the first time that CWD has been identified in free-roaming deer east of the Mississippi River. Since the 2001 deer hunt, 516 deer were killed and sampled in a 415-square-mile surveillance area. Of the 516, eleven (11) tested positive. All 14 deer that tested positive were discovered within 13 miles of each other.

The first positive farmed deer herd was detected in 1997 in **South Dakota**. Since then, positive herds have been found in South Dakota (6), **Nebraska** (3), **Kansas**, **Colorado** (5), and one each in **Oklahoma**, **Montana**, and **Minnesota**. In northwest **Nebraska**, 12 of 25 fenced white-tailed deer were diagnosed with CWD.

#### *Canada*

Dr. Ian Barker, University of Guelph made the first presumptive diagnosis of CWD in 1978. A deer from what was then the Metro Toronto Zoo was diagnosed with spongiform encephalopathy. The deer was part of a small group in which there was a wasting syndrome. CWD was not described as a syndrome until about two years later, so the diagnosis of Spongiform Encephalopathy was based on the appearance of the lesions in the brain, and the similarity to scrapie in sheep. The case was never written up for publication but was public knowledge (Dr. I. K. Barker).



### *Farmed Cervids*

Cases of CWD started appearing in Saskatchewan in 1996. Forty-two premises have been identified as infected and a total of 7,700 cervids from infected herds and from trace-out premises have been killed. Two hundred and twenty seven (227) cervids tested positive for CWD in 42 herds. Scientific information to date indicates that the CWD outbreak can be traced back to a single herd in Saskatchewan that imported CWD-infected animals from the United States in 1989. In March of 2002, CFIA quarantined an Alberta ranch and its nearly 150 elk after an animal was found positive for CWD at slaughter when tested under Alberta's voluntary CWD surveillance program. This herd has now been destroyed. No other animals tested positive for CWD. Twelve trace-out farms have been identified.

### *Free Roaming Cervids*

A **wild mule deer** in Saskatchewan tested positive for CWD in the spring of 2001. As a response to the identification of this animal, wildlife authorities destroyed and tested 463 wild cervids and identified one additional positive animal. Both wild mule deer were from the Manito Hills, south of Lloydminster. Genetic studies showed that both animals were closely related. A third case of CWD has since been found in a wild deer in Saskatchewan.

### **CWD Surveillance in Ontario Farmed Cervids**

There are approximately 25,000 farmed deer in Ontario. The industry includes 5,000 elk, 12,500 red deer or elk/red-deer hybrids, 670 farmed white-tailed deer and 6,700 fallow deer. There are approximately 354 deer farms. Early in 2001, staff of the Ontario Ministry of Agriculture and Food assisted the Canadian Cervid Council in developing and obtaining a grant under the provincial government *Healthy Futures for Ontario Agriculture* program. This grant will help the industry implement an animal identification and trace-back system as well as encourage the voluntary submission of deer heads for CWD surveillance.

OMAF, in partnership with the Animal Health Laboratory (AHL), University of Guelph, has established a high security TSE testing facility to increase TSE surveillance in livestock. As of April 2002, the AHL has been offering CWD screening using immunohistochemistry. From January 2000 to August 2002, 78 deer heads have been tested for CWD using immunohistochemistry. All have been negative for CWD.

To increase the deer-farming industry's awareness of CWD, OMAF staff, in conjunction with CFIA, and the AHL delivered three training sessions on CWD to veterinarians. A CWD Training Kit was also developed. The kit contains the videos, PowerPoint presentations and handouts for the course. It is available on-loan from OMAF.

### **Prevention and Control Measures in Farmed Cervids in Canada**

Since the early 1990s, CFIA has required that a transport animal permit be issued prior to the movement of cervids from one farm to another. Issuance of a transport permit has been based on a negative herd status for tuberculosis. For the past ten years, this permit system has allowed CFIA to follow the movement of farmed deer. In 2001, CWD was included in the list of named diseases under the federal *Health of Animals Act* and a national CWD Voluntary Herd Accreditation Certification program was initiated. This program enables deer farmers to work towards establishing their herds as certified free of CWD. The program is managed cooperatively with the provincial governments of the Prairie Provinces. In eastern Canada, the Canadian Cervid Council (CCC) is the regional administrator for the program.

## Future Research and Tests for TSEs and CWD

Currently, a diagnosis of CWD is made by the presence or absence of the abnormal protein PrP<sup>res</sup> on immunohistochemistry. This involves the removal and staining of the obex part of the midbrain. Extensive research is ongoing to create a test for the TSEs, which identifies the PrP<sup>res</sup> in the preclinical stage. A test for CWD that uses samples of tonsil tissue from live mule deer has been developed. Future work will determine the sensitivity and specificity of this test. The test is apparently ineffective for elk because the disease develops differently in the two species. There still is no live test for elk. Research has been initiated to identify genotypes of both elk and sheep which are resistant to the corruption of normal cellular prion by PrP<sup>res</sup>.

Another **Chronic Wasting Disease (CWD)** training session will be held on **Wednesday, October 16, at Trent University, Peterborough**. Private practitioners, CFIA staff, and Ontario Ministry of Natural Resources staff are invited to attend.

The training includes: the practitioner's responsibilities under the national CWD Voluntary Herd Certification Program, the clinical signs of CWD, a review of the transmissible spongiform encephalopathies (TSEs) and instruction on the techniques for removing the obex region of the brainstem from deer heads.

The CWD Training Kit is also available for loan. The kit contains the videos, PowerPoint presentations, obex removal tool, and handouts used in the training sessions.

If you are interested in attending this training session or borrowing the training kit, contact Dr. Bob Wright (519) 846-3412 or Ora Zondervan (519) 846-0941.

## Vets Are (In) Credible

*Ann Godkin, Veterinary Science, OMAF*

At a recent meeting on “who does what in technology transfer for agriculture,” Dr. Ed Empringham summarized the role of the veterinary practitioner.

Ed showed that veterinary practitioners have a high level of credibility with their clients and are one of the most trusted sources of information. However, he has found that the barriers to successful “veterinarian to producer” tech transfer include:

- the busyness of daily practice and running a private business,
- a lack of recognition by veterinarians of the important role they play as an unbiased on-farm information source for producers,
- veterinarians not being on some farms as often as the producers needed information, and
- veterinarians sometimes not being able to convince producers of the larger issues at stake.

The winter extension season is approaching. Recognizing the increasingly important role a veterinarian plays in technology transfer, will some practitioners and practices be further able to develop more formal approaches to “teaching” their client's about technology that works? Will they:

- run workshops,
- teach Livestock Medicine Courses,
- bring in speakers, or
- conduct management and Return-Over-Feed (ROF) clubs?

Will they be able to add value and interest to practice life and strengthen their role on Ontario's livestock farms?



## Horse Medicines - Their Use and Contraindications

Dr. Bob Wright, Veterinary Science, OMAF

Veterinarians are very influential in the decision making and activities related to horse health. We have to remember the following facts when dispensing medications (*indicated in italics*):



### ***People remember only 20% of what they are told.***

When a veterinarian is called in to diagnose a problem with an owner's horse, it is a very stressful time. Owners often focus on their animal's problem, especially if it is colic or a major injury. It is the veterinarian's responsibility to ensure that owners focus on hearing and understanding the instructions. Some medications may need to be given 2 or 3 times daily. Is the owner or barn manager available to give the medication every 8 or 12 hours for 5 or 7 days in a row?

### ***One third (1/3) of horse owners are new to the horse industry.***

Since many of our horse owners are new to the industry, veterinarians need to show the owner how to load a syringe, where and how a needle should be placed and ensure that the owner can give the medication without endangering the health of the horse or themselves. Refer clients to the information sheet - *Horse Medications - Their Use and Contraindications*.

### ***Young people, especially teenage women, are the main workforce of the industry.***

Some medications that are commonly used in and around the stable can affect the menstrual cycle of women or impact on their health, including pregnancy. Products such as Regumate® can be absorbed after skin contact and especially if wearing latex gloves. The manufacturer warns that the following people **should not** handle this drug: pregnant women, those with thrombophlebitis, coronary disease, women with breast cancer, estrogen dependant neoplasia or undiagnosed vaginal bleeding.<sup>(1)</sup> Provide owners with a written protocol for the proper handling of medicines. This protocol can be hung in the barn for future reference. Refer clients to the factsheet - *Human Health Concerns when Working with Medications around Horses*.

### ***People have achieved a level of information over-load.***

The internet has dramatically increased peoples' access to information. At the touch of a fingertip, one can obtain information on virtually every disease. Unfortunately, this leads to self-diagnosis, misuse of medications, use of homeopathic products of variable and often unknown effects and a blur of what are proper and recognized treatment regimens. For the owner, the calculation of the correct dosage can be a major obstacle. Many owners have difficulty understanding that a milliliter (ml) is the same as a cubic centimeter (cc).

Instructions should be given clearly indicating the dosage (e.g., 10 ml), how the medication is to be given (e.g., by the intramuscular or subcutaneous route) and the frequency and length of usage (e.g., every 12 hours for "X" number of days).

### ***People are more conscientious about their own health and the health of the environment.***

Over the past ten years, society in general and, more specifically, horse owners are more conscious of the impact of improper antibiotic use, the ground water and environmental impact of manure run-off. The avermectin products, such as Eqvalan and Quest, are excreted from the horse and are reported to be quickly bonded to the soil. Approximately one million doses of

these dewormers are used in Ontario each year and, since residues may adversely affect fish and water-borne organisms, safe disposal of residual materials, such as syringes, is important.

***As we get older, the print on medication bottles is getting smaller and harder to read, especially if we are not carrying our glasses to the barn.***

The size of print used on bottles of medications seems to be getting smaller and smaller. Those of us that are over forty and having a struggle with the “length of the arm” when reading and/or are too proud to carry or wear reading glasses or, heaven forbid, bifocals to the barn, have great difficulty deciphering “Is that 1 cc per ml or 2?”. Reading beyond the dose to the fine print is out of the question. Warnings on the package inserts for the avermectin products, Eqvalan and Quest, caution the user to “Wash hands after use.” “Dispose of by burial or incineration.” “Avoid direct contact with skin and eyes.” These are rarely read or followed. Provide readable instructions for every medicine dispensed. Do not rely on the owner reading the label.

***The barn is not a suitable storage area for medications, unless medications are protected from freezing and/or overheating.***

Medications should be stored according to the manufacturer’s recommendations. Some will require refrigeration but are not able to withstand freezing. The barn window or bright shelf in the tack room may not be a suitable storage location for medications that may be sensitive to light. Ensure that owners are storing medicines properly.

***What can we as practitioners do without overwhelming ourselves with paperwork?***

- Practitioners may find that completing a **Horse - Medication Inventory Form** for each farm on an annual basis is a useful tool. The inventory form lists, and gives instructions, for all of the medications that are stored on the farm. See sample form following. Blank forms will be available on our website at [www.gov.on.ca/omaf/livestock](http://www.gov.on.ca/omaf/livestock).
- When new medicines are being dispensed, veterinarians can provide the owner with complete instructions for the medication(s). The easiest way to do this is to have an instruction sheet made up (similar to the Medication Inventory Form) for a number of the commonly dispensed medications. The animal to be treated would be included in the “Treated Animal” column. A copy of these completed forms should be included in the animal-owner’s record.
- Providing a copy of an information sheet on these subjects to your clients will keep them informed and helps to maintain the veterinary-client relationship. The following may be useful and can also be downloaded from the OMAF website [www.gov.on.ca/omaf/livestock](http://www.gov.on.ca/omaf/livestock).

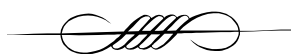
Horse Medications - Their Use and Contraindications

Human Health Concerns when Working with Medications around Horses

Horse Medication Inventory Form - Blank

Horse Medication Inventory Form - with examples

1. *Plumb DC. Veterinary Drug Handbook 4<sup>th</sup> ed. Iowa State Press, 2002.*



***A mind is like a parachute. It doesn't work unless it's open.***

**Unknown**

# HORSE - MEDICATION INVENTORY FORM

Owner Name: \_\_\_\_\_

Farm Name: \_\_\_\_\_

Refrigerator temperature: \_\_\_\_\_ °C or \_\_\_\_\_ °F

Legend			
I.M. - In the muscle	I.V. - In the vein	I.F. - In the feed	T - Topical
S.Q. - Under the skin	O.R. - Oral	I.W. - In the water	* - Vet script/off-label use

Name of Medication	Manufacturer	Treated Animal(s) (e.g. Foal)	Dosage (e.g. 2 mL/45 kg, 1 cc/10 lb, 2x/day or 200 g/t)	Route (see legend)	Significant Contraindications, Cautions or Warnings	Storage on Farm (e.g. fridge, cupboard, etc.)	Withdrawal (days)
DMSO	Fort Dodge	for use in horses in training to reduce acute swelling due to trauma	use 3 times daily; total daily dosage should not exceed 100 mL of liquid and therapy should not exceed 30 days.	T	Wear rubber gloves; apply topically to clean, dry areas to avoid carrying chemicals into systemic system. Avoid inhaling or contact with eyes.	Protect from light. Store in original closed container.	not for use in horses intended for food purposes
PEN G PROCAINE	P.V.U.	for treating bacterial infections	for a 1,000 lb horse 10 mL once daily	IM	300,000 IU/mL Observe caution when used by penicillin-sensitive persons. Shake well before use.	2 - 8°C, avoid freezing	5 days
EQUALAN	Merial	all ages greater than 4 months	liquid 1 mL/50 kg paste 600 mg for 600 kg	OR	Refrain from smoking or eating when handling. Avoid contact with eyes. Wash hands after use. Ivermectin can adversely affect fish.	15 - 30°C	not for use in horses intended for food purposes
Butasone 400 (Phenylbutazone powder)	Jaapharm	cautious use in foals and ponies	4.4 - 8.8 mg/kg q24h. Do not exceed 8.8 mg/kg/day. Administer q8h. (Comes in 1 g active ingredient in 10 g of powder).	OR	Doses greater than recommended have resulted in intestinal ulcerative lesions. Necrotizing phlebitis of the portal vein has been observed in horses receiving higher doses for extended periods of time.	Store between 8 - 15°C or in a refrigerator.	not for use in horses intended for food purposes
Butazone Injectable	Rogar/STB		200 mg/mL IV only, 1-2 g/454 kg	IV	Do not use IM or SQ; it is very irritating.	15 - 30°C	
REGUMATE (altrenogest)	Hoechst	to suppress heat in mares	1 mL/110 lbs. for 15 days	OR	Those that <b>should not</b> handle this drug include: pregnant women, those with thrombophlebitis, coronary disease, women with carcinoma of the breast, estrogen dependant neoplasia or undiagnosed vaginal bleeding. Can be absorbed after skin contact, especially if wearing latex gloves.	room temperature	not for use in horses intended for food purposes

Additional information: \_\_\_\_\_

Reviewed and approved by (print) \_\_\_\_\_ on \_\_\_\_\_ (print) and \_\_\_\_\_ on \_\_\_\_\_  
Date Date

(sign) \_\_\_\_\_ (sign) and \_\_\_\_\_  
Owner/Employee Veterinarian

## Communicating Disease Alerts to Practitioners

Kathy Zurbrigg, *Veterinary Science, OMAF*

OMAF Veterinary Science is responsible for ensuring veterinarians in the province are made aware of changes and developments which may impact themselves or their clients. A recent example was the detection of West Nile Virus in horses, and the subsequent increase in client concern and requests for information about this issue. OMAF had been following the situation closely and acted quickly to update veterinarians and the public on the risks and prevention options concerning this disease. However, the rapid dissemination of information to Ontario veterinarians can be problematic. There is a wide range of technological preferences and capabilities across the province, and no one method of delivery will satisfy everyone.

In the past, many clinics have stated a preference for standard mail. For routine information, this is the method of choice for OMAF also. If the issue is of a more urgent nature, surface mail is the slowest method, and often the mailing gets lost in the "I'll read that later" box.




E-mail is the most efficient means of communicating with a large number of people quickly. Documents can also be attached for printing and distribution. Some practitioners only have a personal e-mail address, and have concerns about giving it out. Access to the OMAF Veterinary Science e-mail address database is restricted to the Provincial Veterinarian and a limited number of disease surveillance staff, and will only be used for the most urgent and time-sensitive communications.

Fax is faster than standard surface mail, but less efficient than e-mail. Fax lines are frequently busy or out of date. As a result, we only reach about half of the clinics on our fax list.

Please let us know which method of communication you prefer for your practice and inform us of changes to your fax or e-mail details. Responses can be sent to Kathy Zurbrigg at OMAF Veterinary Science, [kathy.zurbrigg@omaf.gov.on.ca](mailto:kathy.zurbrigg@omaf.gov.on.ca), (519) 846-3418.

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Your sheep producers might be interested in the following seminars.

<b>Ministry of Agriculture and Food</b>	 <b>Ontario</b>	<b>Managing Flock Expansion</b>
<b>Ontario Sheep Marketing Agency</b>		<b>Building Blocks for Productive Flocks</b>
<b>University of Guelph</b>		Plan on attending this program to learn about developing and selecting replacement females and expanding the ewe flock.
		<b>Tuesday, Nov. 19, 2002 - Atwood, ON</b> <b>Thursday, Nov. 21, 2002 - Napanee, ON</b>
		Call 1-877-424-1300 or (519) 826-4047 or visit the OMAF web site <a href="http://www.gov.on.ca/OMAF">www.gov.on.ca/OMAF</a>

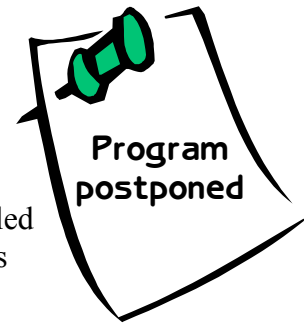


## Johne's Disease Beef Project Postponed

Jocelyn Jansen, *Veterinary Science, OMAF*

for the Production Limiting Disease Committee (PLDC)

The project to look at Johne's disease prevalence in Canadian cow-calf beef herds has been postponed until 2003. Too few producers have enrolled to date and many have been affected by the severe drought in the west this summer.



Producers, who had already signed up, will be contacted shortly and asked to re-enroll in 2003.

## Canadian gFARAD - 1-866-243-2723

Neil Anderson, *Veterinary Science, OMAF*

1-866-243-2723

Food-animal, residue avoidance information became available to Canadian veterinarians on October 1, 2002. The service is bilingual.

When calling, be prepared to give the following information:

1. Veterinarian's contact information - telephone and fax numbers, and e-mail address;
2. Generic and trade name of the drug or chemical;
3. Dose administered (in mg/kg bodyweight);
4. Route of administration;
5. Volume injected per site;
6. Number of doses given;
7. Dosing interval;
8. Species/class of animal involved;
9. Health status of the animal(s) involved.

## Got Cystic Ovaries?

*Dr. Hernan Ortegon and Dr. Walter Johnson,  
Population Medicine, Ontario Veterinary College*

Cystic ovarian disease (COD) is a problem affecting postpartum dairy cows, leading to delays in conception and a longer days-open period. Insulin Growth Factors and other components of the reproductive hormonal system, and a protein called Leptin, are suspected to be involved in the pathogenesis of COD.



Dr. Hernan Ortegon, a new DVSc student at the Ontario Veterinary College, and Dr. Walter Johnson are planning a study that will work towards the identification of IGF-related systems and Leptin in affected cows. They want to collect follicular fluid from post-partum cows with COD, using ultrasound directed aspiration techniques.

These researchers want to get in touch with practitioners in Ontario who can assist them in contacting producers whose herds have a high incidence of cystic ovarian disease.

If you have clients whose herds have a high incidence of COD and who would be willing to participate, please contact Dr. Hernan Ortegon at (519) 824-4120 extensions 6005, 4415 or 6962 or by e-mail at [hernan@uoguelph.ca](mailto:hernan@uoguelph.ca)

## Continuing Education

- Oct. 15 & 16, 2002 Ag Engineering Workshop for Ag Professionals, Lantern Lodge Motor Inn, Myerstown, PA. <http://AgEngWorkshop.cas.psu.edu> For more information contact John Tyson (717) 248-9618 or [jtyson@psu.edu](mailto:jtyson@psu.edu).
- Oct. 16, 2002 Ontario Association of Swine Practitioners meeting. Antimicrobial resistance update and CQA audit results. Blue Moon, Petersburg, Ontario. 5:30 p.m.
- Oct. 16, 2002 Chronic Wasting Disease Workshop (half-day workshop), Trent University, Peterborough. Contact Bob Wright (519) 846-3412, [robert.wright@omaf.gov.on.ca](mailto:robert.wright@omaf.gov.on.ca).
- Nov. 7 - 9, 2002 8<sup>th</sup> Great Lakes Dairy Sheep Symposium and Charter Meeting of the Dairy Sheep Association of North America. Cornell University, Ithaca, New York. Contact Michael Thonney (607) 255-2851, [mlt2@cornell.edu](mailto:mlt2@cornell.edu), <http://www.sheep.cornell.edu/sheep/dairysheep/dss.html>
- Nov. 13, 2002 Healthy Teat Ends: Key to Quality Milk, Lancaster Host Resort and Conference Center, Lancaster, PA. Contact Carol Burns, (814) 863-0489, [cmb3@psu.edu](mailto:cmb3@psu.edu), <http://www.vetsci.psu.edu/Ext/ced/TeatEnds.htm>
- Nov. 19 & 21, 2002 Sheep Seminars, *Building Blocks for Successful Flocks*, Nov. 19 - Elma Memorial Community Centre, Atwood, Ontario; Nov. 21 - Lions Hall, Napanee, Ontario. <http://www.gov.on.ca/OMAFRA/english/livestock/sheep/facts/nov20flock.htm>, 1-877-424-1300 or (519) 826-4047.
- Nov. 21, 2002 Ontario Association of Bovine Practitioners meeting. "Where's the beef?" Holiday Inn, Guelph, Ontario, 8:30 to 5 p.m. Full program description at [www.oabp.ca](http://www.oabp.ca)
- Nov. 23, 2002 3<sup>rd</sup> Annual Dialogue on Nutrition (Equine). Presented by the University of Guelph and the Equine Research Centre. OVC Lifetime Learning Centre, University of Guelph. [www.open.uoguelph.ca/equine](http://www.open.uoguelph.ca/equine) (519) 767-5000, fax: (519) 767-1114.
- Nov. 27, 2002 Ontario Association of Swine Practitioners meeting, Blue Moon, Petersburg, Ontario, sponsored by the Animal Health Laboratory. Cocktails at 5:30 p.m.; Dinner at 6:00 p.m.; Discussion at 7:00 p.m. RSVP by Nov. 25 to Dr. Janet Alsop's office, (519) 291-3276 or [janeta@wightman.ca](mailto:janeta@wightman.ca)
- Jan. 26 - 29, 2003 Annual meeting of the National Mastitis Council. Radisson Hotel Plaza, Fort Worth, Texas. [www.nmconline.org](http://www.nmconline.org)
- Jan. 29 - 31, 2003 Fifth International Dairy Housing Conference. Fort Worth, Texas.
- Jan. 30 - Feb. 1, 2003 Ontario Veterinary Medical Association annual conference. The Westin Harbour Castle, Toronto, Ontario. Contact Christine Neziol [cneziol@ovma.org](mailto:cneziol@ovma.org) or visit <http://www.ovma.org>
- Feb. 25 & 26, 2003 Alexandria  
March 3 & 4, 2003 Listowel  
March 5 & 6, 2003 Woodstock OMAF Office  
OMAF Free Stall Housing Design Seminars. Farm visits and discussion on layout, ventilation, stall design, feed and water, manure, lighting, parlor design and other topics. (519) 537-6621, fax: (519) 539-5351, [jack.rodenburg@omaf.gov.on.ca](mailto:jack.rodenburg@omaf.gov.on.ca).

**CEPTOR feedback form**

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

We have \_\_\_ practitioners in our clinic and would like to receive \_\_\_ copies of **CEPTOR**.  
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Mailing address: .....

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Tel.: ..... Fax: .....

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Please return this form with your comments to:

Ann Godkin, Veterinary Science, OMAF, Wellington Place, R.R. # 1, Fergus, Ontario N1M 2W3  
Tel: (519) 846-3409 Fax: (519) 846-8101 Email: [ann.godkin@omafra.gov.on.ca](mailto:ann.godkin@omafra.gov.on.ca)

Topics for future issues include: .....

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Comments: .....

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**Deadline for next issue: November 15, 2002**



Veterinary Science  
2<sup>nd</sup> Floor, Wellington Place  
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