CEPTOR

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Spring is back and so is CEPTOR!!

No, you didn't misplace two issues! Due to other commitments, we found it necessary to temporarily pause CEPTOR production.

We strive to distribute CEPTOR to large animal veterinarians across Ontario on a quarterly basis and are back on track to do so in 2006. We hope you enjoy this Spring 06 issue and look forward to the summer issue.

The Two Categories of Swine Welfare Issues

Tim Blackwell, Animal Health and Welfare, OMAFRA

The welfare of swine in modern confinement rearing systems is a topic of sporadic concern to consumers. Swine welfare issues can be divided into herd problems and individual animal problems. Housing sows in gestation stalls throughout their pregnancy is an example of a herd welfare issue. The second category of welfare problems occurs at the individual animal level. This category includes such issues as timely euthanasia of terminally ill animals or the use of pain killers to relieve suffering in swine. Debate will continue regarding the welfare implications of gestation stalls. However, there will be little debate on whether unnecessary suffering in swine should be tolerated. Veterinarians must address issues of individual animal suffering on swine farms.

A survey was sent to 30 Ontario veterinarians who were identified as potentially working with swine in clinical practice. The veterinarians were asked to rate pain from 1 (no pain) to 10 (worst pain) for 18 common conditions or procedures in swine. Fourteen veterinarians responded to the survey. The ten most painful conditions were:

Condition	Average Pain Score	Range
Pleuropneumonia	6.3	1 - 10
Lameness (>3 out of 5)	6.4	4 - 9
Surgical inguinal hernia repair	6.8	4 - 9
Prolonged dystocia/tenesmus	6.9	3 - 10
Castration (>8 weeks of age)	6.9	6 - 10
Vasectomy (>6 weeks of age)	7.1	3 - 10
Cryptorchid surgery	7.1	5 - 10
Surgical umbilical hernia repair	7.1	5 - 10
Caesarian section (post-op)	7.1	0 - 10
Meningitis	8.0	0 - 10

Among the 14 respondents, there was a wide range of interpretations regarding the severity of pain associated with each condition. Most conditions had a range of at least 5 scores from lowest to highest and some had the full range of scores from 1 to 10 for the same condition (e.g., pleuropneumonia and vasectomy). There was also a wide range of practices in terms of the use of analgesics to treat these same conditions. This survey demonstrates the large variation in the perception of pain in swine by veterinary practitioners. Although the treatment of individual painful conditions in pigs may seem of minor concern to some, ignoring this responsibility could create strong negative perceptions by consumers. The recognition and treatment of painful conditions in swine requires our further attention.

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Stockmanship Tip

George Charbonneau, DVM, and
Tim Blackwell, Animal Health and Welfare, OMAFRA

The humane destruction of terminally ill pigs is a necessary but difficult act of mercy for many stock people to perform. However, putting an end to unnecessary suffering is one of the many duties of a professional caretaker. Over the last decade, work has been done to design simple and humane methods to carry out this procedure. Carbon dioxide ($C0_2$) chambers have been used successfully on some farms to euthanize small pigs. However, blunt trauma remains a common method to end the life of a suffering pig.

Correctly applied, blunt trauma is a quick and effective method to kill a terminally ill pig up to eight kilograms. Not all stock people are comfortable with the technique. One reason for this discomfort is that, when properly applied, blunt trauma to the skull results in hemorrhage from the skull as well as the nose. In addition, there is often some involuntary movement of the pig after the blow is applied. There are reports from other countries that advocate striking the pig at the base of the skull as a means to eliminate the hemorrhaging and terminal movements. This method, if properly applied, dislocates the spine between the neck and the skull and renders the pig instantly unconscious due to spinal cord shock. Because the skull is not affected there is no bleeding. Although dislocating the spine appears to kill the pig, in many cases the pig is still alive but unconscious. Lack of movement due to spinal trauma can easily be misinterpreted as death. Many of these pigs will recover consciousness but will be unable to move and will eventually die from hypothermia. Such a death is by no means humane.

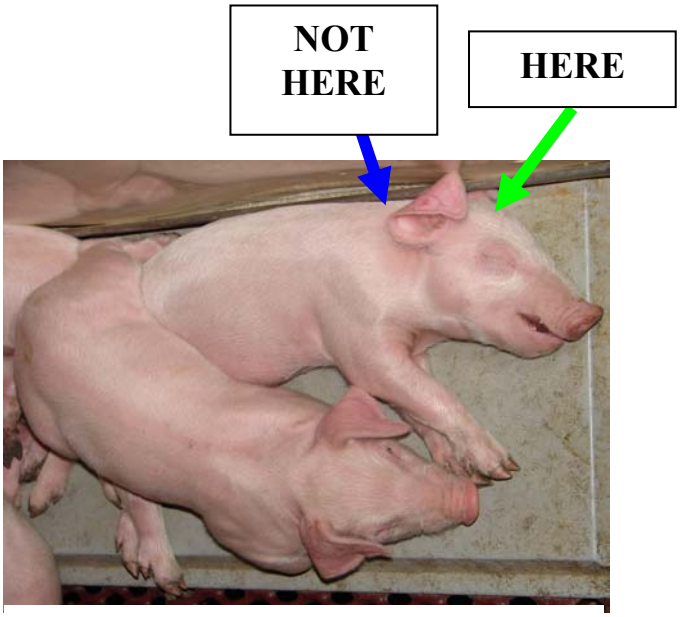


Figure 1. Blunt trauma should be applied to the skull and not the neck.

Properly performed euthanasia is a true act of kindness. Dislocation of the neck of a pig is not. An important topic for an upcoming herd health visit can be proper euthanasia techniques. Ensure that your clients understand the difference between blunt trauma to the skull and dislocation of the cervical spine. It is a subtle but important distinction to make. See **Figure 1**.

Congratulations Leslie!!

After several months as 'Acting' Manager, Dr. Leslie Woodcock is now the 'Permanent' Manager of the Animal Health and Welfare Unit of the Livestock Technology Branch of OMAFRA.

We are happy to have you Leslie!

Timing is Everything:
A Diagnostic Tool for Poor Swine Conception Rates

Kathy Zurbrigg, Animal Health and Welfare, OMAFRA

The shift to artificial insemination in the swine industry transferred the responsibility of sow and gilt heat detection from the boar to the AI technician. The responsibility is great since timing of insemination is the single most important factor in any successful breeding program. Although many other factors can affect conception rates on swine farms, including nutrition or stress, timing of insemination is the key.

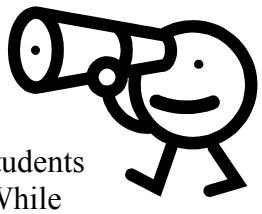
Accurate heat detection is challenging as there are many factors that affect behavioural estrous. A normal sow estrous cycle is 20-22 days in length; however it can range from 18-25 days. The period where a sow is receptive (in standing heat) can range from hours to several days and studies have shown that there is great variation in the estrous to ovulation interval. As would be expected, there is also a large amount of variation in signs of heat, or the strength of those signs, shown by sows in estrous.

It is often difficult to diagnose the cause of poor conception rates. Since timing of insemination is the most important factor in successful breeding, investigating whether or not this is the problem on a particular farm is a productive place to start. To identify if this is the problem, a farm can use a protocol which synchronizes ovulation. This protocol has been used in research studies by Dr. Glen Cassar and Christine Pelland at the University of Guelph. The protocol involves giving sows an IM injection of 600 IU of equine chorionic gonadotrophin (eCG) at weaning to induce follicular development. A second IM injection of 5 mg of porcine luteinizing hormone (pLH) is given 80 hours after the eCG to induce ovulation. Sows are then bred once, 36 hours after the second injection. If this protocol results in greatly improved conception rates, there is strong evidence to indicate that the timing of insemination was a significant factor influencing sow fertility.

As a diagnostic tool, a farm with lower than expected conception rates might try the protocol for three to six weeks. If the conception rate of the trial group shows significant improvement, timing of insemination/heat detection is likely a component of the problem. To address this, the veterinarian and the producer should review the farm's AI protocol. This may include changing boar exposure practices, increasing the frequency of heat detection or investigating herd wean to estrous intervals.

Looking for Farms: Evaluation of Free-Access Feeding – Acidified Milk

Neil Anderson, Animal Health and Welfare, OMAFRA



This note is an appeal to Ontario veterinarians. Several Ontario dairy and goat-milk producers have been using a free-access feeding system with acidified milk since June 2005. One project for our Summer Experience Students will be to evaluate challenges and opportunities with the feeding system. While visiting farms, they will also collect a sample of acidified milk for bacteriological culture and return results to owners. Would you please ask your clients who have tried, or are using, the system if they would participate? Please provide contact information to Neil Anderson by fax (519) 846-8101, telephone (519) 846-0941 or e-mail: neil.anderson@omafra.gov.on.ca. We also welcome a chance to learn of your experiences. Thanks for your help.

Chronic Wasting Disease and the Ontario 2006 - 2007 Surveillance Project

Bob Wright, Animal Health and Welfare, and
Brian Tapscott, Alternative Livestock Specialist, OMAFRA

Chronic Wasting Disease (CWD) has been diagnosed in farmed and/or wild cervids (deer and elk) in nearby states and two provinces. The presence of CWD in farmed and wild cervids in Alberta and Saskatchewan has virtually eliminated all inter-provincial and international markets for live cervids, velvet antler and meat, regardless of the province of origin.

For the Ontario cervid industry to be able to access these markets in the future, it will be imperative to demonstrate that CWD does not exist in Ontario. Therefore, OMAFRA, in cooperation with the Ontario deer and elk farming industry, is aiming to increase CWD surveillance of farmed cervids.

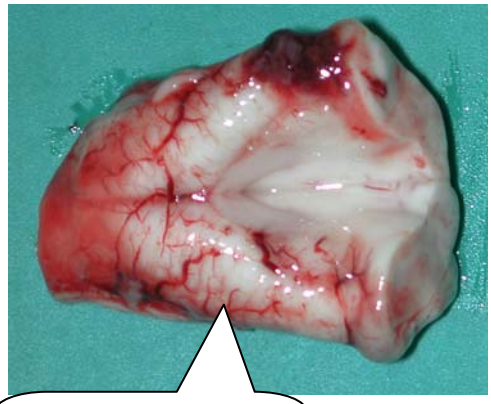
CWD surveillance consists of collecting samples of the obex section of the midbrain in the case of elk and red deer or the obex and retropharyngeal lymph nodes in the case of mule and white-tailed deer. For cervids 12 months or older, all on-farm deaths should be tested, as well as a proportion of the deer processed in abattoirs. Producers wishing to participate in the National Voluntary Chronic Wasting Disease Herd Certification Program will also need surveillance data on their herd. Details of the herd certification program and a veterinarian's responsibilities can be found at www.inspection.gc.ca/english/anima/heasan/disemala/cwdmdc/certnorme.shtml

One of the barriers to conducting surveillance and enrolling in the herd certification program has been the cost of sampling and testing. OMAFRA has launched a CWD surveillance project starting April 1, 2006, and running until March 31, 2007. This project will include a sampling allowance for producers and, in addition, will cover the cost of testing samples for CWD.

Program details have yet to be finalized but, in general, producers will pay no testing costs and will receive payment (amount to be determined) per sample submitted to the laboratory.

Veterinary involvement in the program will be on a fee-for-service basis billed to the producer, and consists of:

- Obtaining the obex section of the midbrain from elk and red-deer heads presented to them by producers. For white-tailed and mule deer, collect retropharyngeal lymph nodes in addition to the obex.
- Placing the obex and retropharyngeal lymph nodes in separately marked whirl packs or special canisters and freezing them.
- Shipping samples to the Animal Health Laboratory (AHL) by prepaid Purolator, quoting the University of Guelph account number 0966901.



Place the entire obex into a whirl pack or canister and freeze.

A submission form is being developed specifically for submitting samples to the AHL under the Ontario Chronic Wasting Disease Surveillance Project. Forms will be available from AHL - Guelph (519) 824-4120 ext 54510; AHL - Kemptville (613) 258-8320; or OMAFRA Fergus (519) 846-0941. Results of all laboratory testing will be sent to the producer and veterinarian.

Should veterinarians require training in the collection of the obex and retropharyngeal samples, contact Bob Wright. A 2006 CWD Training Kit will be available soon.

Age Verification

Paul Stiles, Ontario Cattlemen's Association

Canada's beef exports are currently operating under age restrictions - under thirty months of age to the U.S. and under twenty-one months of age to Japan. While dentition is an approved method of determining age for export to America, it is inaccurate and has cost Canada's producers dearly in over-thirty-month (OTM) discounts.

The Canadian Cattle Identification Agency (CCIA) database can accommodate calf birth dates. The Canadian Food Inspection Agency (CFIA) and OMAFRA have stated that CCIA birth dates will override dentition in determining age at slaughter plants and for export. Japan will only accept CCIA birth dates for determining age of cattle. Canadian beef producers have an opportunity to add value to their calves by inputting their calf birth dates to CCIA. The birth dates submitted can either be the exact date of birth or the first day of the calving period, i.e., calves born between January 15 and March 20 could be registered as January 15 calves. CCIA accepts electronic records only. Producers who do not have internet access can appoint a third party to input data for them. Beef Improvement Ontario, some tag retailers, and some veterinary clinics are offering this valuable service. Subsequent owners of age-verified calves can access the birth dates through CCIA. Veterinarians who want more information are invited to contact CCIA (1-877-909-2333) or the Ontario Cattlemen's Association (1-866-370-2333).

Free-Choice Feeding of Acidified Colostrum to Goat Kids

Neil Anderson, Animal Health and Welfare, OMAFRA

Sickness and deaths in neonatal kids prompted an investigation into feeding protocols at an Ontario dairy farm. **Figure 1** shows a typical kid with signs of diarrhea, inappetance and depression. Onset of illness and deaths were common between three to ten days of age.

Figure 1

Challenges and Opportunities

Challenges with colostrum quality (late harvest), under-nourishment (thin body condition), engorgement stress (pot bellies after feeding) and diarrhea were identified and addressed with a modified feeding protocol. This protocol was designed to mimic the normal feeding behaviour of ad libitum sucking, whereby kids consume small quantities at each feeding episode. The intention also was to improve consumption of colostrum and transition milk in the first few days of life.

Old Protocol for Harvesting and Feeding Colostrum

Does and doelings freshening after the morning milking had their colostrum harvested at the evening milking. Those freshening after the evening milking were first milked at the regular morning milking. Colostrum was pooled, placed into plastic soft drink bottles and refrigerated. The first feeding for newborn kids was pooled colostrum within one hour of birth. A second feeding was about two hours later. Kids were fed to appetite by nipple bottle. Subsequent feedings were at morning and evening chore times and the quantity varied with appetite. **Figure 2** shows newborn kids housed in their sibling groups in plastic bins in a nursery where they were

hand fed with nipples and bottles. After about 48-72 hours, they were moved into group pens in another barn, where they received pooled colostrum by nipple bottle for an additional four days before entering a larger group pen with access to an automatic feeding machine and milk replacer.

Figure 2

The nursery was heated with a floor heating system. The second barn had supplemental heat and the goal was to achieve a temperature of 20°C. However, bunching and huddling of kids in the receiving pens in the second barn may have indicated cold stress. **Figure 3** shows temperatures in the receiving pens in the second barn ranged from 10°C to 24°C and averaged 16.6°C during May 19-25, 2005.

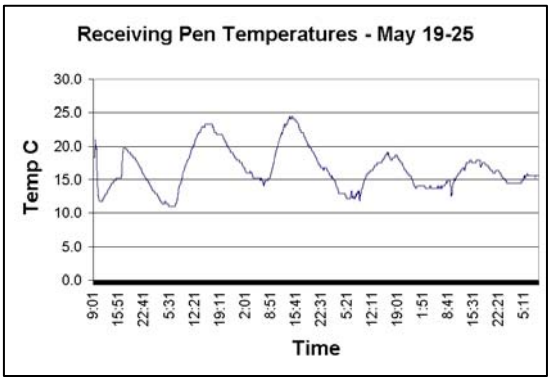


Figure 3

New Protocol for Harvesting and Feeding Colostrum

The new protocol began on June 1. Does and doelings were milked within one hour of freshening and mature doe colostrum was kept separate from that of doelings. The first harvest of colostrum from mature does was used for the first two feedings of all kids, including those born of doelings. The additional first-harvest colostrum from does was acidified and fed ad libitum in the nursery. Colostrum and transition milk (up to 7 days post-freshening) from doelings was pooled with transition milk from mature does and acidified for ad libitum feeding in the receiving pens in the second barn. Does were milked at regular evening and morning milkings. Transition milk was pooled, acidified and stored in 10-L pails covered with lids. Newborn kids were hand fed fresh unacidified colostrum within one hour of birth and again two hours later. Before the second hand feeding, they were placed into group pens with access to acidified colostrum as shown in **Figure 4**. The new protocol for harvesting and feeding colostrum began with a test group of buck kids. Within several days, the owners recognized that the health of the 'test buck kids' was better than that of the doe kids being fed on the existing feeding program. Therefore, they chose to feed all kids according to the new protocol.

Figure 4

Figure 4. Caregivers assisted kids to the nipples and assured that they were nursing the acidified colostrum. Initially, in the nursery, kids were kept in their sibling groups but this soon changed to co-mingled groups of kids as shown in the photograph. The suckling by the oldest kids seemed to entice new additions to the nipples.

Figure 5

Figure 5. At 48 hours of age, kids moved to receiving pens in the second barn where they had free-choice access to nipples attached to pails containing acidified colostrum and/or transition milk for another four days. From there, they moved into a larger group pen and had free-choice access to milk replacer from an automatic feeder. Acidified colostrum and transition milk were

available at ambient temperature. Acidified colostrum and transition milk were fed from June 1 – July 7, 2005 in this pilot project.

There were no changes in sanitation strategies for cleaning the plastic bins in the nursery, or the pens in the second barn during the weeks of observation. The pens in the receiving barn were cleaned daily and bedded with straw. The nipples, plastic tubing and one-way valves were washed every three days and the pails were washed as they were emptied.

Records of First Treatments and Deaths

At the time of the May 18th visit, a simple record keeping system was set up on a white board. Each day, caregivers recorded the number of kids 1-10 days old, the number receiving a first treatment and number that died that day. **Figure 6** is a stacked bar graph showing daily counts. The light bottom section of the bars shows the number of kids 1-10 days of age on the date and the dark top of the bars shows the number of kids that received a first treatment on the date. The graph also shows that kidding season was drawing to a close.

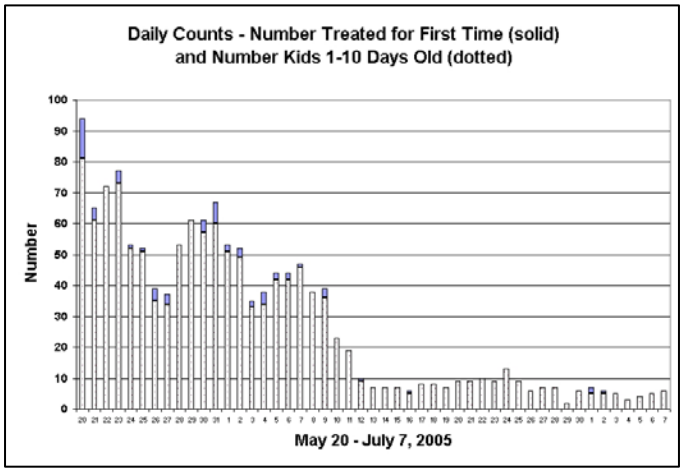


Figure 6

Table 1 shows descriptive statistics for daily first treatments shown as a percent of kids 1-10 days of age on each day from May 20 - July 7, 2005. May 20 - 31 is Period 1 when kids were fed with the old protocol. During Period 2, June 1 - 10, the data included kids fed on the old protocol, a combination of old and new and entirely on the new feeding protocol. During Period 3, June 11 - July 7, all kids were fed on the new protocol.

Table 1

	May 20-31	June 1-10	June 11-July 7
Number Days	12	10	27
Kid Days at Risk - age 1-10 days	690	394	197
Number First Treatments	41	19	5
Median % First Treatments	6.1	4.8	0
First Treatments/100 kid-days at risk	5.9	4.8	2.5
Number Deaths	9	1	0
Deaths / 100 kid-days at risk	1.3	0.3	0

Figure 7 shows first treatments (grid columns) and deaths (solid columns) per 100 kid-days at risk for kids 1-10 days of age for Periods 1, 2 and 3. Statistical analysis showed the distributions of daily first treatments differed for Periods 1 and 3 (*Kruskal-Wallis Statistic, P-Value 0.0024*), whereas those for Periods 1 and 2 and Periods 2 and 3 were similar.

The conclusion is that kids reared in Period 3 (June 11 - July 17) received significantly fewer first treatments than those reared in Period 1 (May 20 - 31).

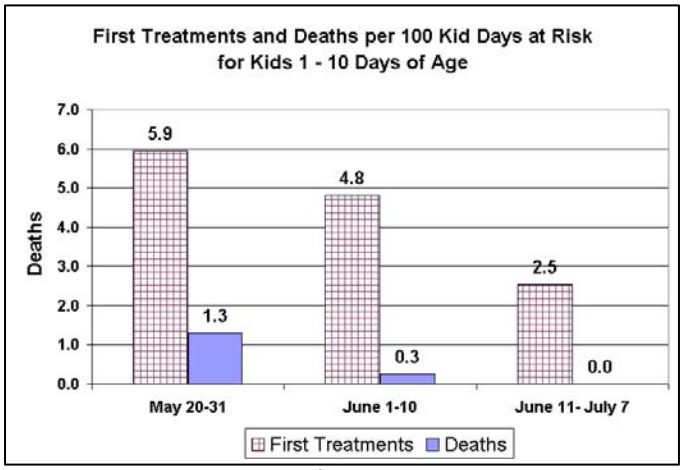


Figure 7

Discussion
Warmer ambient temperatures and fewer kids (population density in the receiving barn) during June and July may have contributed to better health. Early harvest of colostrum and using mature doe colostrum for the first two feedings and two days of life may have provided enhanced immunity. Acidification to pH 4-4.5 permitted the use of ad libitum feeding at ambient temperatures without spoilage of milk. Free-choice feeding mimicked normal suckling behaviour and meant less labour and easier chores for caregivers. The true test will come in the next kidding season when the owners plan to use the new protocol for all kids.

Post-Script
Two doelings, freshened as stragglers in August, and their kids were fed according to the old feeding protocol. All of these kids got sick between three to five days of age and died. The owners recently reported few, if any, kids reared on the new feeding protocol have had coughs or received treatments for coughs, whereas many reared on the old feeding protocol developed coughs and have been treated. They are exploring ways to change over from acidified colostrum and transition milk to acidified milk replacer next kidding season.

Post-Post-Script - The 2006 kidding season has arrived. The owners are feeding acidified colostrum, milk and/or milk replacer free-access for kids less than 21 days of age. A few hundred kids have been born and only a few have died. Another 2,000 kids are expected. I will give an update in the next issue of CEPTOR.

The Ontario Johne's Disease (JD) Prevention Program
Part 2, Commencing January 2006

Part 2 of the Ontario JD Prevention Program provides funding for producers to assist them in discovering the status of their herd with regards to JD and to work with their herd veterinarian to change calf raising in ways that will prevent infection of heifer replacements with the JD bacteria.

In Part 2, unlike Part 1, there is no direct funding for veterinary practitioners.

Here are the specific steps a veterinary practitioner needs to take to participate in the JD Program.

1. Contact Mary Van den Borre at OMAFRA to begin your participation in Part 2. If you have already participated in JD training (Part 1 of the project), you are ready to start with your own clients. Mary will send you a package containing five sets of copies of the Consent Form, Pre-visit Questionnaire and Risk Assessment form. (If you were not trained in Part 1 of the project, contact Drs. Ann Godkin or Jocelyn Jansen for more information.)

2. Promote the program to your dairy clients. Any producer can enrol in Part 2 of the project. The herd does not need to have a history of JD.

   When you enrol a producer, they need to:
   a. Complete and sign the consent form. The consent form accompanies the DHI samples to the lab. This form authorizes DHI to send the Johne's test results to you and the producer, as well as the provincial coordinator for aggregate analysis. **All cow, herd and owner information will be kept in strict confidence.**

b. Request that the Johne's test be run on ALL milk samples at the next test date if there are 60 or fewer milking cows - OR - 2nd lactation and above if there are more than 60 milking cows.

c. Complete the Pre-visit Questionnaire before the herd consultation with you.

3. Schedule a herd visit with the producer once you have received the herd's Johne's test results from DHI.

4. Conduct the consultation using the Risk Assessment Form for Dairy Replacement Heifers.

5. Provide the producer with a short written report describing recommended calf raising changes. This report can be written on-farm, time permitting, or sent to the producer after the visit.

6. Mail a copy of each of the following to the provincial coordinator:
   - Pre-visit Questionnaire
   - Risk Assessment and
   - the final written report from the farm.

   When these are received, DHI will be notified that all requirements have been completed and a $400.00 credit will be issued to the producer's DHI account. **Producers will not be paid until you have handed in all three (3) completed documents.**

Thank you for participating in the Johne's Disease project.

For more information contact:

Ontario Provincial Coordinator, OMAFRA, Fergus
Mary Van den Borre, (519) 846-0941 ext. 208
E-mail: mary.vandenborre@omafra.gov.on.ca

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Dr. Jocelyn Jansen, (519) 846-3414
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Suckling Behaviour of Eight Holstein Calves on Ad Libitum Milk Replacer

Neil Anderson, Animal Health and Welfare, OMAFRA

Ad libitum feeding and group housing are ways to integrate natural behaviour of calves into new facilities or renovations of existing barns. Since producers remove dairy calves from their dams, observations of ad libitum feeding allow us to compare nature's way to the common practice of feeding calves two, three or four times per day.

Eight calves ranging in age from 4 days to 35 days were fed milk replacer acidified to pH 4-4.5 with Formic Acid. They were housed in two groups of four calves and each group had access to two nipples attached to a 110-litre plastic garbage receptacle containing the milk replacer. Time-lapse video recordings for a single 24-hour period allowed scoring of suckling activity.

Figure 1 shows suckling bouts and number of meals per day. The calves suckled 5 to 36 times per day with an average of 11.8 (± 3.6 standard error of mean (SEM)). Suckling bouts separated by a pause of 45 minutes or greater were defined as new meals. Suckling bouts separated by several seconds or minutes were considered pauses within a meal. The calves consumed 4 to 14 meals per day with an average of 7.4 (± 1.1) and median of 6.5 meals.

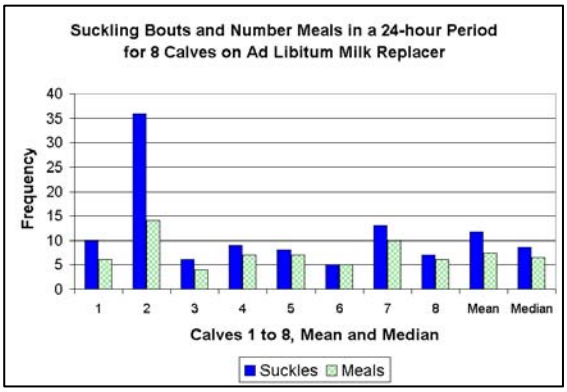

Figure 1

Figure 2 shows the total suckling time and average suckling time per meal for the 8 calves. Total suckling times ranged from 32 to 72 minutes with an average of 48 (± 4.7) minutes per calf per day. For these calves, an average meal ranged between 4.8 to 9.1 minutes with a mean of 6.9 and median of 6.8 minutes.

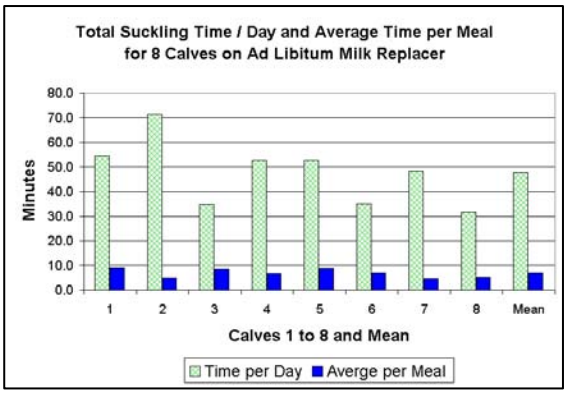

Figure 2

Figure 3 shows the distribution of suckling times per meal for 8 calves and 59 meals. An average meal lasted 6.5 (± 0.4) minutes with a median of 6.6. Approximately 50% of meals lasted between 4 to 9 minutes.

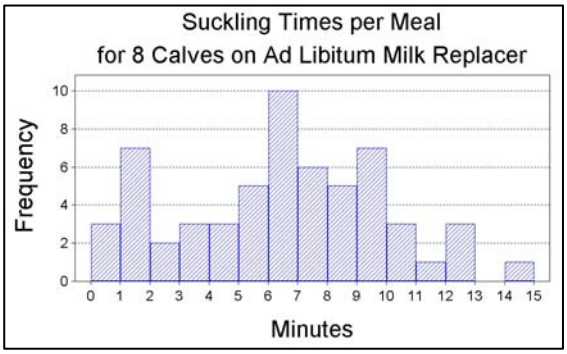

Figure 3

Figure 4 shows distribution of 59 meals by hour for 8 calves. There appears to be a clustering of meals around dawn and evening hours. About 20% of meals were consumed between 4:00 am and 9:00 am and 42% of meals between 19:00 and 22:00 hrs. The milk-replacer container was removed for refilling between 9:00 to 9:30 hours. Lights were left on to facilitate video recording during night hours. It is unknown if this lighting encouraged suckling activity during normal darkness.

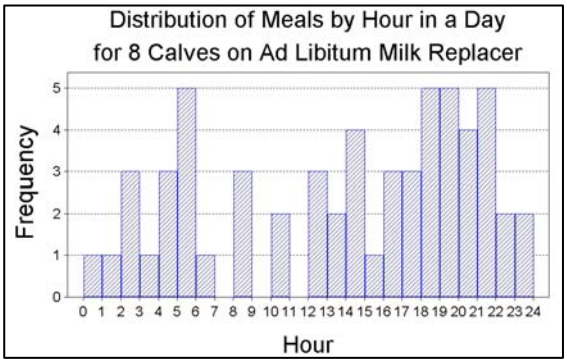

Figure 4

Figure 5 shows the distribution of time in minutes between meals for 8 calves on ad libitum milk replacer. The average time between meals was 254 (± 24.8) minutes. The median was 210 and the range was 46 to 840 minutes. Generally, 65% of meals were consumed at intervals less than 5 hours. Two intervals were outside the range and do not appear on the graph.

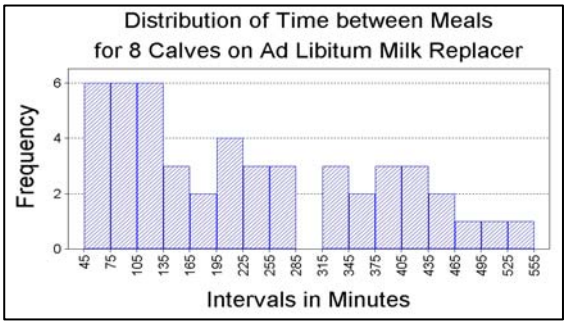

Figure 5

Discussion and Summary

This report provides insight into feeding activity of eight calves during a pilot project demonstrating consumption of acidified milk replacer. When given ad libitum access to milk replacer using two teats for four calves, the eight calves in this project chose to consume about seven meals and suckled 48 minutes per day. Their meals lasted an average of 6.5 minutes and 50% of meals ranged from 4 to 9 minutes. Calves ate 60% of their meals in early morning and evening hours. In addition, they ate 65% of their meals at intervals of less than 5 hours. Clustering of feeding times and length of time occupying a nipple may signal a need for several teats for a group of calves rather than restricted access. Ad libitum feeding is uncommon on Ontario dairy farms and there are no recent data to show the actual frequency of calf feedings per day. A US survey (National Animal Health Monitoring System, 1993) indicated 98% of producers fed milk replacer twice a day. Nature's way is obviously different from traditional twice-a-day feeding. Getting back to it with simple ad libitum feeding equipment may be easier than we think.

Acknowledgements

Jenny Montgomery and Tyler O'Neill, OMAFRA summer experience students, collected the data for this report. A special thanks to the herdsmen and owners of Mountainview Farms for generously participating in the project.

Electric Cow-Trainer Placement Study

Kathy Zurbrigg, Animal Health and Welfare, OMAFRA

In 2003, 320 tie-stall farms provided information for a research study that looked at the relationships between stall dimensions and cow comfort. The study was conducted jointly by Dairy Farmers of Ontario, the University of Guelph, and the Ontario Ministry of Agriculture, Food and Rural Affairs.

Several points of interest were discovered in the research project, which we would like to investigate further. Of particular interest **is the relationship between the location of the trainer and cow cleanliness.**

An invitation to participate in a second study will be sent out to the original study farms at the end of April. Participation in the study is voluntary. The cows will be scored for cleanliness. Current measurements of the stall, the cow and the trainer location will be recorded. The study will only publish aggregate results. If you have dairy clients that use electric cow trainers and you would like them to be notified of the study, please contact Kathy Zurbigg, (519) 846-3418 or kathy.zurbrigg@omafra.gov.on.ca

Gain or Loss by Day 7 When Feeding Calves 4 Litres of Milk Per Day

Neil Anderson, Animal Health and Welfare, OMAFRA

The practice of feeding 4 litres of whole milk per calf per day regardless of their body weight could be justifiable if the practice supports weight gain. To test the hypothesis, I borrowed data from 5 trials at an Ontario research station. Upon entry at 1-2 days of age, calves were weighed, housed in hutches, and offered 2 litres of whole milk by nipple bottle morning and evening. In one trial, 14 of 28 calves did not have free-choice water available during the first 7 days, my time of interest for this report. Otherwise, calves had free-choice water and starter available. All trials took place during summer months over the past few years.

Figure 1 shows the average daily gain and loss for 179 Holstein bull calves over a 5-6-day period between entry at 1-2 days of age and weighing at 7 days of age.

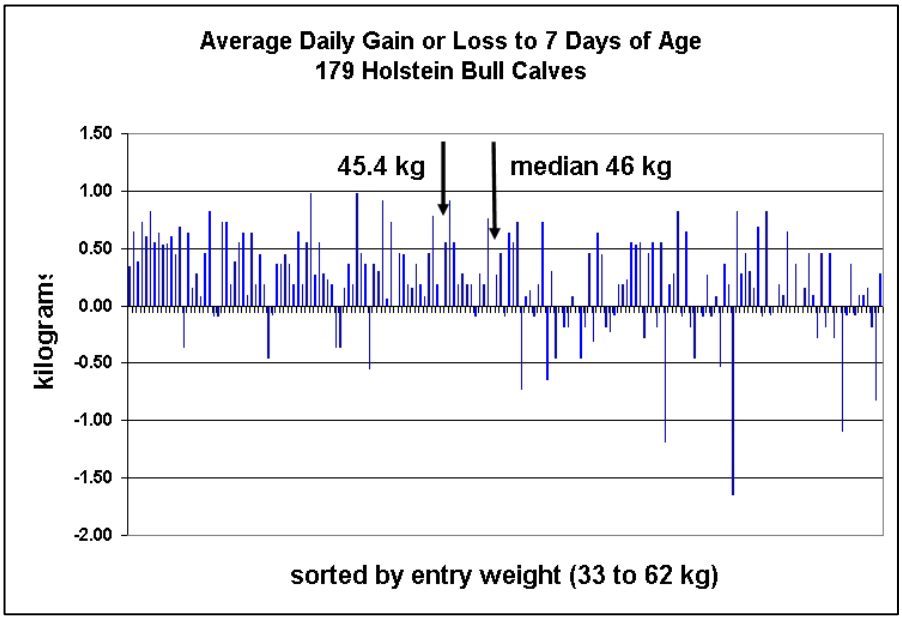

Figure 1

The data are sorted by entry weight. Entry weight ranged from 33 to 62 kg with an average and median of 46 kg. Forty-two calves (23%) lost weight, 10 calves (6%) maintained their body weight and 127 (71%) gained weight in the first week. Using the median weight as a cut point, 12 of 87 (14%) under it and 40 of 92 (44%) over it did not gain weight. Calves greater than 46 kg were 4.8 times more likely to lose weight (Odds Ratio=4.8, 95% CI 2.3 - 10.0).

These data support rejection of the common practice of feeding 4 litres of whole milk to all calves regardless of their birth weight. Feeding 4 litres of milk per day is indefensible for calves weighing greater than 45 kg because of the significant odds that they lose weight. Anecdotally, Ontario producers report good results after switching to feeding 6 litres per day to newborn calves. Without a knowledge of birth weight, 6 litres per day is a justifiable choice.

Acknowledgements
Dr. Ken Leslie and Miss Cindy Todd, Department of Population Medicine, Ontario Veterinary College, and Mr. Dennis McKnight, Kemptville College, University of Guelph, kindly shared their data for this report.

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Individual ROF History	Milking Cow Summary	Group Comparisons
ROF Dry Cow Report	Dry Cow Summary	

   - If you provide DHI with your company logo, it will appear on all summary reports. Where no logo is provided, a CanWest DHI logo will be used.

** for more details refer to the document "Agreement for Use of ROF Program" from CanWest DHI

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ROF Results Provide *(& allow comparison of)*
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Continuing Education/Coming Events

May 16 - 18, 2006	2006 Minnesota Dairy Health Conference. St. Paul Campus, University of Minnesota. www.cvm.umn.edu/outreach/events/dairy
June 8 - 10, 2006	Western College of Veterinary Medicine and Saskatchewan Veterinary Medical Association Annual Conference, Delta Bessborough Hotel, Saskatoon, Saskatchewan. www.usask.ca/wcvm or www.svma.sk.ca
June 21, 2005	Ontario Association of Swine Veterinarians annual meeting. Ontario Pork Congress, Stratford fairgrounds (evening).
June 21 & 22, 2006	Ontario Pork Congress, Stratford fairgrounds, Stratford, ON. (519) 625-8811, Fax: (519) 625-8878, e-mail: opc@orc.ca . www.porkcongress.on.ca/
July 5 - 8, 2006	Canadian Veterinary Medical Association Annual Convention, Delta St. John's Hotel and Conference Centre, St. John's, Newfoundland. Contact Linda Huskins (613) 236-1162 ext. 126, lhuskins@cvma-acmv.org . www.canadianveterinarians.net/index.aspx
July 9 - 13, 2006	American Dairy Science Association, American Society of Animal Science, 2006 Joint Annual Meeting, Minneapolis, Minnesota. www.adsa.asas.org/meetings/2006/
July 15 - 19, 2006	143rd American Veterinary Medical Association (AVMA) Annual Convention, Honolulu, Hawaii. avmaconvention.org/
July 30 - Aug. 1, 2006	American Association of Equine Practitioners (AAEP) Continuing Education Meetings. Focus 2006: Focus on Dentistry in conjunction with the 14th Annual Practice Management Seminar, Indianapolis, Indiana. AAEP office (859) 233-0147, e-mail: aaepoffice@aaep.org . www.aaep.org/continuing_edu.htm
August 9 & 10, 2006	National Mastitis Council (NMC) Regional Meeting, Delta Prince Edward Hotel, Charlottetown, Prince Edward Island. www.nmconline.org/meetings.htm
Sept. 12 - 14, 2006	Canada's Outdoor Farm Show, Woodstock, Ontario. www.outdoorfarmshow.com/
Sept. 21 - 23, 2006	American Association of Bovine Practitioners Annual Convention, Saint Paul, Minnesota. www.aabp.org
Oct. 12 - 19, 2006	110th United States Animal Health Association Annual Meeting, Minneapolis Hilton Hotel, Minneapolis, Minnesota. www.usaha.org
Nov. 3 - 12, 2006	The Royal Agricultural Winter Fair, National Trade Centre, Exhibition Place, Toronto, ON. www.royalfair.org/start.html
Nov. 24 - 26, 2006	Ontario Equestrian Federation Annual Conference, Alliston, Ontario. www.horse.on.ca/news/2006_conference.html
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Wellington Place, R.R. # 1, Fergus, Ontario N1M 2W3
Tel.: (519) 846-3418 Fax: (519) 846-8101 E-mail: kathy.zurbrigg@omaf.gov.on.ca

Comments: .....

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Deadline for next issue: May 15, 2005

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