Mission Statement of AASRP

“To improve the health and welfare of sheep, goats, cameldids and cervids, to further the professional development of the members, provide resources to elevate the standards of small ruminant practice and to be the voice for small ruminant issues.”
"GOAL 50 MEMBERS"

Held in Conjunction with the AVMA Annual Convention
July 14 – 18th, 2007
Washington, D.C.

Hotel Location and Room
to be announced in next issue

Meeting Date: Saturday, July 14th
Time: 2:00 PM Annual Membership Meeting

Please join the AASRP Board for an informative gathering to address important organizational guidelines

2007 AASRP ANNUAL MEMBERSHIP & BOARD MEETING

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350 E. 2nd Street
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Ph: 909-699-0550
dwatts@western.edu

FOR POLICY, ORGANIZATIONAL, OR TECHNICAL QUESTIONS, PLEASE CONTACT THE AASRP BOARD AT X: X: X: X:

University of Missouri
VACANT
University of Nebraska
VACANT
University of Colorado
VACANT
University of Florida
VACANT
University of Georgia
VACANT
University of Illinois
VACANT
University of Minnesota
VACANT
University of Tennessee
VACANT
University of Wisconsin-Madison
VACANT
University of Wyoming
VACANT
University of Saskatchewan
Lyall Poteri, DVM, MBCVS
Dept of LG animal Clinical Sciences
Western College of Vet Medicine
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lyall@vet.med.uwsask.ca

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NOTE TO STUDENT: If you cannot reach your liaison contact aasrp.org

VACANT Liaison Locations:
Purdue University
VACANT
University of Missouri
VACANT
University of Pennsylvania
VACANT

July 7, 2006
Lama pacos


CALL FOR NOMINATIONS
PRESIDENT-ELECT DIRECTORS REGION 1 AND REGION 4

It is time to submit nominations for AASRP Board of Directors. Nominations for President-Elect and Directors in Region 1 and Region 4 will be accepted through March 31, 2006 and voting ballots will go out shortly after that date. When nominating someone please make sure that they are aware and desire to serve a two-year term on the board. The board members are asked to participate in a monthly conference call and meet twice a year for a face-to-face meeting. The regions are broken down as follows:


Region 4 (Pacific Time Zone): Alaska, California, Hawaii, Nevada, Oregon, Washington, (Western Provinces of Canada)

Note: Some states are actually split due to time zones; make your nomination accordingly for a practitioner in your region.

Currently, Dr. Michael Rings (Ohio) fills the position of Director in Region 1 and Dr. Peregrine Wolff (California) fills Director of Region 4. Dr. Michael Rings is not eligible for re-election after serving two terms. Dr. Peregrine Wolff has served one (1) term and will be eligible for re-election.

The President you elect can live anywhere, but please nominate only a veterinarian living in your region for the regional director position. Submit your nomination by mail, e-mail, or fax. Contact Peggy Logsdon at the AASRP office if you have any questions regarding this process.

AASRP • 2413 Nashville Rd. Suite 112; MS-CS1
Bowling Green, KY 42101
Ph: 270-793-0781 • Fax: 502-413-6625
Email: aasrp@aasrp.org

Management Announcement
The AASRP Board of Directors has signed a new management agreement with Reburn-Julia Associates, LLC. Peggy Logsdon has accepted a position at RJA and will continue to handle all of AASRP’s business affairs. There will be an official notice sent to all members with new contact information.

The following is the new address and fax:

2413 Nashville Rd. Suite 112; MS-CS1
Bowling Green, KY 42101
Ph: 270-793-0781
Fax: 502-413-6625
(The phone number will remain the same)

The email account for AASRP and the website has already been moved and you should not experience any interruptions in these services. Please notify me if you have any problems or concerns.

RJA and I look forward to a year of growth in 2007 and will continue to look for new areas to service membership needs.

Respectfully submitted,

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Respectfully submitted,
Minutes

Board Meeting via Conference Call
October 25, 2006

Call to Order
President Joan Bowen called a meeting of the AASRP Board to order at 9:15 a.m.

Roll Call
Participating were Joan Bowen, Joe Snyder, Paul Jones and Barbara Roberts. Absent were Mike Rings, Glen Zebart, LaRue Johnson and Peregine Wolff. Peggy Logsdon was present and recorded minutes.

Dr. Jones made a motion to set aside the By-Laws and conduct business as a full quorum. Dr. Snyder seconded. Motion carried.

Agenda

• Minutes

Minutes of 09 27 06 were presented for approval. Motion was made by Dr. Snyder to approve September minutes, Dr. Roberts seconded. Motion carried.

• Financials

The Financials for September were presented for approval. Motion was made by Dr. Jones to approve September financials, Dr. Snyder seconded. Motion carried.

• Old Business

AVMA Conference January 2007 – Peggy Logsdon contacted Dr. Amy Wyatt to congratulate her on being selected as the recent graduate to attend the AVMA conference in January. Registration materials were forwarded to her. Board members are registered for attendance.

NIAA Contract Renewal – Peggy Logsdon reported that the NIAA Executive Committee has offered the position of CEO to Peggy Vise-Hrown of NIAA. This will note be presented to the NIAA Board of Directors for confirmation. Final announcement should be made within the next two weeks. Peggy Logsdon will notify the AASRP board when final decision is made. The AASRP board will make their final determination of contract renewal after all positions have been finalized at NIAA.

NIAA Board Meeting – Dr. Cindy Wolf and Dr. LaRue Johnson attended this committee at USAHA to provide a report. Dr. Jones seconded. Motion carried.

USHA Scrape Committee – Dr. Cindy Wolf and Dr. LaRue Johnson attended this committee at USAHA to provide a report on behalf of AASRP. Dr. Wolf will contact Dr. Snyder on the proceedings.

NAVC Board Meeting – Dr. Snyder made a motion to hold the meeting at the Gaylord on Monday night, January 15th at 6:00 p.m., Dr. Roberts seconded. Motion carried.

New Business

• NCOE Benchmarking Program for Small Ruminant Practitioners – Peggy Logsdon will put up an update on this program in the next issue of Wool & Wattles.

There being no further business the meeting was called at 9:45 a.m. CST. The next scheduled conference call will be November 29 at 9:00 a.m. Central time.

Respectfully Submitted,
Peggy Logsdon
Administrative Director

Minutes

Board Meeting via Conference Call
November 29, 2006

Call to Order
President Joan Bowen called a meeting of the AASRP Board to order at 9:05 a.m.

Roll Call
Participating were Joan Bowen, Joe Snyder, Paul Jones, LaRue Johnson, Peregine Wolff, Glen Zebart and Barbara Roberts. Absent were Mike Rings, Peggy Logsdon was present and recorded minutes.

Agenda

• Minutes

Minutes of 10 25 06 were presented for approval. Motion was made by Dr. Snyder to approve September minutes with correction, Dr. Wolff seconded. Motion carried.

• Financials

The Financials for October were presented for approval. Motion was made by Dr. Wolf to approve October financials, Dr. Snyder seconded. Motion carried.

Old Business

• AVMA Leadership Conference January 2007 – Peggy Logsdon contacted Dr. Amy Wyatt to congratulate her on being selected as the recent graduate to attend the AVMA conference in January. Registration materials were forwarded to her. Board members are registered for attendance.

• NIAA Contract Renewal – Peggy Logsdon reported that the NIAA Executive Committee has offered the position of CEO to Peggy Vise-Hrown of NIAA. This will note be presented to the NIAA Board of Directors for confirmation. Final announcement should be made within the next two weeks. Peggy Logsdon will notify the AASRP board when final decision is made. The AASRP board will make their final determination of contract renewal after all positions have been finalized at NIAA.

• NAACV Board Meeting – Dr. Cindy Wolf and Dr. LaRue Johnson attended this committee at USAHA to provide a report. Dr. Jones seconded. Motion carried.

• USHA Scrape Committee – Dr. Cindy Wolf provided a report from Katherine O’Rourke and it was distributed to the AASRP board for their review.

New Business

• AVMA Clinical Practitioners Advisory Committee – Dr. David Wallace has submitted his bio and interest to represent AASRP for a second term. Motion was made by Dr. Johnson to accept Dr. Wallace for second term, Dr. Jones seconded. Motion carried.

(continued on next page)
The Institute for Genomics Research and scientists at Australia’s Commonwealth Scientific and Industrial Research Organization led the effort to orientate the sequences into the virtual map. "The USDA competitive-grant funding was essential for developing the sheep physical map. It was only by committing the funds from the USDA and the Worlds, we were able to finance the project. We hope to carry forward the initiative and obtain the entire sheep genome sequence," says Cockett.

In addition to the funding, the speed of the process was attributed to complete genomic maps in other species, such as the cow. The bovine genome sequence was recently completed by the Baylor College of Medicine Human Genome Sequencing Center in Houston, Texas, supported by an international consortium of funding sources led by the National Institutes of Health and the USDA. "Due to the similarity of the bovine and ovine genome sequences, scientists were able to build a virtual picture of the sheep genome by combining the information obtained from the bovine genome sequencing project," says USDA’s Ronnie Green, who is the executive secretary of the National Science and Technology Council’s interagency working group on animal genomics.

"Scientists in all fields of genomics research are excited about this organized map for sheep. Our next goal will be to verify the orientation of the sequences and eventually have the entire sheep genome sequence completed," says Cockett.

"The release of this map is a huge milestone in the world-wide sheep industry. A map of the sheep genome will offer enormous possibilities that many of us could not have imagined," comments Lyndon Irwin, PhD, chair of the American Sheep Industry Association’s (ASI) Production, Education and Research Council. "It will be particularly valuable for producers, who want genetic control of economically important production traits, as well as for disease issues."

The information gained through mapping the genomes of sheep is valuable to producers around the world. In fact, at its annual meeting, the Tri-Lamb Group, which consists of sheep-producing organizations from the United States, Australia and New Zealand, ranked functional sheep genomics as its number one research priority. The International Sheep Genomics Consortium, a partnership of scientists and funding agencies from the United States, Australia, the United Kingdom, New Zealand, France and Kenya, has been formally working on this endeavor since 2002. The result of this multi-country collaboration has resulted in a virtual map of the sheep genome with the aid of data from cows, dogs and humans. This map will be made public to allow for more rapid DNA marker tests, which will accelerate and improve the efficiency of sheep research in genomics.

The goal of this project is to determine gene functions from genomic information in sheep and utilize that information to address specific industry needs. This information can assist producers in developing a product that better meets the customer’s demands in terms of meat and wool production. In addition, genes that control gastrointestinal diseases and reproduction traits can be identified.

"This map is a tool that increases our efficiency in searching for those genetic components that are so valuable to the sheep producer," explains Noelie Cockett, PhD, College of Agriculture dean and vice president for Extension and Agriculture at Utah State University and the sheep genome coordinator for the United States. "This is an incredible resource for researchers working with sheep and is a several-fold increase improvement over what we have had in the past."

Cockett was awarded a U.S. Department of Agriculture (USDA) competitive grant to assist in generating the data for the sheep genome map. The United Kingdom’s Genesis Fatsby, Meat and Livestock Australia and Australian Wool Innovation also provided funding for this project. Sequencing was completed at the Wellcome Trust Sanger Institute in Cambridge, England, where 114 sheep were sequenced.

Minutes

Board Meeting via Conference Call
November 29, 2006 (cont’d)

AABP — Sponsor Breakfast on Saturday a.m., Dr. Snyder will check on details with AABP.

DMVER, Colo. - Breeding the right sheep, whether for improved wool, mohair, increased fertility or a better ability to cope with parasites, has been one of the sheep industry’s greatest challenges. However, with the November release of a physical DNA map of more than 98 percent of the sheep genome, scientists will be better able to pin-point the genetic controls for these economically important production traits.

The International Sheep Genomics Consortium, a partnership of scientists and funding agencies from the United States, Australia, the United Kingdom, New Zealand, France and Kenya, has been formally working on this endeavor since 2002. The result of this multi-country collaboration has resulted in a virtual map of the sheep genome with the aid of data from cows, dogs and humans. This map will be made public to allow for more rapid DNA marker tests, which will accelerate and improve the efficiency of sheep research in genomics.

Dinerle, Peter Orwick, executive director of ASI, notes the importance of collaborating on research and appropriate adaptive technology as this issue provides promising information for the sheep industries of the world. The Institute for Genomics Research and scientists at Australia’s Commonwealth Scientific and Industrial Research Organization led the effort to orientate the sequences into the virtual map. “The USDA competitive-grant funding was essential for developing the sheep physical map. It was only by committing the funds from the USDA and the Worlds, we were able to finance the project. We hope to carry forward the initiative and obtain the entire sheep genome sequence,” says Cockett. In addition to the funding, the speed of the process was attributed to complete genomic maps in other species, such as the cow. The bovine genome sequence was recently completed by the Baylor College of Medicine Human Genome Sequencing Center in Houston, Texas, supported by an international consortium of funding sources led by the National Institutes of Health and the USDA. “Due to the similarity of the bovine and ovine genome sequences, scientists were able to build a virtual picture of the sheep genome by combining the information obtained from the bovine genome sequencing project,” says USDA’s Ronnie Green, who is the executive secretary of the National Science and Technology Council’s interagency working group on animal genomics. “Scientists in all fields of genomics research are excited about this organized map for sheep. Our next goal will be to verify the orientation of the sequences and eventually have the entire sheep genome sequence completed,” says Cockett.

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“The Tri-Lamb group recognizes the importance of collaborating on research and appropriate adaptive technology as this issue provides promising information for the sheep industries of the world,” says Peter Orwick, executive director of ASI. ASA is a national organization supported by 43 state sheep associations, benefiting the interests of nearly 67,000 sheep producers.

American Sheep Industry Association • 9785 Maroon Circle, Suite 388 • Englewood, Colorado 80112-2992 Telephone (303) 771-3500 • Fax (303) 771-8200 • <http://www.sheepusa.org>

For More Information Contact:
Paul Rodgers (914) 671-9991, or p Rodgers2@earthlink.net Amy Trinidad (303) 771-3500, ext. 55, or amy@sheepusa.org Judy Malone (303) 771-3500, ext. 35, or jmdyn@sheepusa.org

November 29, 2006 (cont’d)

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sheep or any use at all in goats must take responsibility for
residue avoidance in milk and meat. Penicillin in milk is only
partially destroyed by pasteurization and residues can cause
antibiotic reactions in people consuming dairy products or
adversely affect starter cultures used for fermented dairy
products. Subcutaneous injections may be preferred to avoid
pain and meat quality issues and they provide similar blood
concentrations to IM. A major advantage of subcutaneous
injection is it is injected per os in cows. However, erratic, higher,
or more prolonged levels may occur in tissues or milk. Testing of
urine or milk of cows treated subcutaneously should be
advised. The label for the bovine 12,000 IU/kg IM through 36 hours.
In sheep given 20,000 IU/kg IM (approximately 3 ml per
100 pounds), milk residues were detectable until 8 days. FARAD
recommends testing milk or urine prior to marketing if
extralabel penicillin is given. Some commercial beta lactam
products have an 8- or 9-days activity in camelids. The male’s penis enters deep into the
uterus which can result in bruising and infection. A minimum
contamination breeding technique will limit these risks but
requires ultrasound examination of the ovaries for follicular
activity. The llama or alpaca with a history of fertility problems
should be bred when a mature follicle of 8 to 12 mm is
present. Breeding should not occur more frequently than once a
week, and 0.5 to 1 mg of GnRH may be used selectively to
induce ovulation. The female should be checked for pregnancy
or receptivity 12 to 14 days after mating. Although camels
may develop orchitis and epididymitis associated with brucellosis,
testicular infections in alpacas and llamas usually ascend from
scrotal wounds. Infectious causes of abortion in llamas and
alpacas in North America include leptospirosis, toxoplasmosis,
chlamydiosis, listeriosis, sarcocystosis, neosporosis, and BVD.
Abortions work-up will be as for other species, including
sending the fetus and its placenta and paired serum samples
from the dam to a diagnostic laboratory. Umbilical cord
infections cause severe outbreaks. Umbilical cord manipulation
may be a cause of neonatal deaths. Enterotoxemia types A and
C can lead to severe outbreaks. C. perfringens type D and
tetanus boosters are advised 4 to 6 weeks before the due date, but
7- or 8-way clostridial vaccine should be avoided in pregnant females, as
abortions have been associated with vaccination. Potential
causes of cria diarrhea include E. coli, rotavirus, coronavirus,
Cryptosporidium, and Coccidiosis. Additional Eosinophilic
passive transfer and maintaining good biosecurity and hygiene
on the farm will help prevent these problems. Animals
introduced to or returning to the farm should be coccideal
for a minimum of 3 weeks and attendants should wear
dedicated protective clothing when dealing with these animals in
the barn. A large herd should be quarantined by pregnancy
status and stage of gestation. This review paper also
includes much more information on camel reproduction than
has been mentioned in this abstract.

A more detailed report by your LAC member can be viewed on the
AASRP web site.

Legislative Advisory Committee Report

In September, The AVMA Legislative Advisory Committee met at the Federal Relations Office in Washington D.C. Following are updated comments of note:

As you probably know The American Horse Slaughter Prevention Act passed in the House in April, was on the Senate calendar. But, there are 7-8 Senators that have a hold on the bill. Since the bill has not gone forward this year, it will have to be reintroduced in 2007. The major parts of the act is to: 1) ban horse slaughter for human consumption and 2) prohibit funding for care of unwanted horses, stop the pipeline of unwanted horses or live with the reality that there is an economic need to “process” unwanted horses.

The Small Business Health Plan legislation was in the Senate at the close of the 19th.

The Veterinary Workforce Expansion Act needs more cosponsors in the Senate. It is currently in the Senate’s Health, Education, Labor and Pension Committee. It did not move in what the 109th Congress. The major questions have been 1) Why is veterinary medicine more in need of the funding than the physicians and nurses and 2) How can we measure the money that will be spent on veterinary medicine? An answer for #1 is the need for veterinarians to handle increased zoonotic diseases. For #2 there could be loan repayment from nonfederal funds and there could be targeted admissions.

The Pet Evacuation and Transportation Standards Act of 2006 passed the House and Senate and was on the President’s desk for signature. The legislation ensures that State and local emergency preparedness operations plan the needs of individuals with house pets and service animals following a major disaster or emergency.

The Animal Enterprise Terrorism Act has passed the Senate by unanimous consent on the last day of Congress. Many and on the LAC and PAC lobbied Senators for this bill during Hill visits at the last LAC & PAC meetings. It was currently stuck in the Judiciary Committee of the House but as you know by now, has been passed.

Funding for the National Veterinary Medical Services Act (NVMSA) continues to be the major effort for securing appropriations. This law passed in December 2003 authorized the Secretary of Agriculture to establish a loan repayment program for veterinarians who are used for farm veterinary shortage and emergency situations. In FY 2006 NVMSA received $500,000 in total funding for establishment of a pilot program. The AVMA continues to work with members of Congress to obtain full funding for NVMSA.

The 2007 Reauthorization of the Farm Bill is a major legislation for the livestock industries that deals with major farm and food legislation. The major parts of the farm bill deal with farm income and commodity price supports and crop insurance. Animal health and animal welfare. The legislation will impact the veterinary profession, animal health and welfare and agriculture research programs.

For more information on any legislation or GRD activities contact
GRD Director Dr. Mark Lutschaunig, mlutschaunig@avma.org or 800-521-1473 ext.3205.

A more detailed report by your LAC member can be viewed on the
AASRP web site.
Abounds (continued from previous page)  
neck (2 ml). The lambs in the no anthoexia groups received 5 ml of 0.9% NaCl injected in the same manner. Blood was collected for cortisol determination using an indwelling catheter and behavior was recorded by an observer outside the pen (the observer was blind to treatment). All groups showed no cortisol concentration in serum cortisol concentration but all groups had returned to pretreatment values within 2 hours after castration. Local anesthesia reduced the peak cortisol level after castration by rubber ring and tended to do so with Burdizzo castration. Burdizzo castration with or without local anesthesia resulted in a more rapid return to baseline compared with rubber ring application or control handling. The authors suggest that waiting 10 min rather than only 5, as done in the Burdizzo group, might have mitigated the anesthetic effect. During a 2 hour observation period after castration, rubber ring without anesthesia caused the most active abnormal behavior (foot stamping, kicking, restlessness). Rubber ring with anesthesia reduced the active behavior to the control level (H+). Abnormal postures such as standing arched back, extended hind limbs while lying, or dog sitting were significantly less in the ether and H+ groups than in the controls. Lambs castrated without anesthesia (RB, B+) showed significantly higher rates of abnormal active behaviors than did the H- group for days 1 to 6 after treatment, well beyond the duration of lidocaine anesthetic. Moderate to severe local swelling of the scrotum lasted an average of 16 days after Burdizzo castration. The scrotum was larger and remained up and off the body for an average of 25 days after rubber ring application. Daily weight gain was not significantly influenced by castration method or by tissue type. Clinical and histological examination of the testis was 100% for both methods. Burdizzo-castrated testes were examined histologically at slaughter and no sperm cells seen, though small bits of testicular tissue were present with Sertoli cells, rare spermatogonia, fibrocytes, macrophages, and hemosiderin deposits or dystrophic calcification. S.C. Millemia et al. Vet Journal 172:274-283, 2006

INFECTION PRIONS IN THE SALIVA AND BLOOD OF DEER DISEASE-INDUCED PRION DISEASE (CWD) IN WOOLLY MAMMALS  
S.C. Mellema et al.  

DEATH FROM CHEST COMPRESSION AND VENTILATORY SUPPORT AFTER MEDICATION-INDUCED ASPIRATION PNEUMONIA IN A 4-YEAR-OLD FEMALE DORSET LAMB  
C.K. Mathiason et al.  

HEALTHY LLAMAS  
SEDATIVE EFFECTS OF FENTANYL AFTER TRANS-DERMAL ADMINISTRATION AT THREE DOSAGES IN HEALTHY LLAMAS  
T.L. Grubb et al.  
Veterinary Record 122:176-179, 1988

The presence of infectious prions in saliva may explain the easy transmission of the disease by deer to deer in high density or captive situations. Too few animals were used and the trial was too short to rule out transmission through urine and feces. C.K. Mathiason et al. Science 314:153-156, 2006  

ASSESSMENT OF SERUM CONCENTRATIONS AND SEDATIVE EFFECTS OF FENTANYL AFTER TRANS-DERMAL ADMINISTRATION AT THREE DOSAGES IN HEALTHY LLAMAS  
T.L. Grubb et al.  
Veterinary Record 122:176-179, 1988

Fentanyl patches would probably be an expensive way to supply analgesia in llamas. The potential applicability of transdermal fentanyl delivery using patches was investigated in llamas, a species that is easily stressed. Three healthy adult llamas (all females, mean weight of 150 kg) were used in the study. Three animals received a single 75 µg/h patch, equivalent to approximately 0.5 mg fentanyl/kg. The next group of 3 llamas received 2 of these patches, equivalent to 1 mg/kg. The last group received 4 patches. These doses were extrapolated from the low-end dosages recommended for dogs and cats. The patches were placed on the left side of the antebrachium and wiped clean with water. The corners of the patches were stapled to the skin and the patch and leg were trimmed at the end of the study. 5 Jungular catheters were placed to allow serial blood sampling over the next 72 hours. Heart rate and respiratory rates and sedation scores were recorded every 30 minutes up to 24 hours, then daily. No sedation was noted in any animal at any time, not even slight lowering of the head or ears or protrusion of the lower lip. No gross skin changes were detected after removal of the patches. Serum fentanyl concentrations did not reach measurable levels (0.14 ng/ml) in 2 of the group one llamas and were erratic in the group two animals, peaking at 0.19 mg/ml by 12 hours. The group 3 animals reached peak serum fentanyl values of 0.38 ng/ml by 12 hours and concentrations remained fairly steady 0.5 mg/ml until the patch was removed at 72 hours. Serum values recommended for animals range from 0.5 to 3.0 mg/ml and these values are similar to those determined to provide analgesia in humans. The patches could be used to achieve values within the recommended range, but the required dose for many or all patches would be far too expensive. The transdermal delivery of a drug required to provide adequate analgesia in llamas is not known. T.L. Grubb et al.  
JVPA 69:907-909, 2005

EXTRALABEL USE OF PENCILLIN IN FOOD ANIMALS  
Meat and milk withdrawals are difficult to predict when higher concentrations of drug are given to sheep or goats. Procaine penicillin G is approved for IM administration in cattle and swine; however the use in sheep and goats is not approved. Withdrawal times can range from 7 to 21 days. Veterinarians prescribing other dosages or SC use in (continued on next page)
Dichelobacter nodosus to susceptible animals. Initial control efforts centered on foot bathing (copper sulfate and formalin, later zinc sulfate) and systemic antibiotics. Whole flock vaccination with a commercial multivalent vaccine was also employed, but it is known that the multiplicity of antigens in this product interferes with the immune response and that it persisted in the Bhutan flock 10 years after introduction. For this study, animals were identified as infected by tipping them up and examining all 4 feet. Affected animals (score of 2 or greater) were marked but remained in their original management group (rams, ewes, or weaners) on the farm. Cultures were obtained from the 50 animals with a foot- scab score of 2 or greater, and the hoof pathologists made diagnoses for anaerobic incubation. All 50 yielded Dichelobacter nodosus and isolates were subcultured on 2% hoof agar, then hypoxanthesized. The samples were sent to Sydney, Australia for serotyping. Forty of these isolates were successfully regrown and all were confirmed to be serogroup B. An autogenous monovalent whole cell serogroup B vaccine was prepared by emulsifying the cells in Montanide oil, to achieve a final preparation of 5 x 10^8 D. nodosus cells/ml vaccine. In a pilot study, 28 previously infected sheep were vaccinated with 1 ml of vaccine SC at a 30 day interval or left as controls. By the time of the second dose, vaccinated animals were much less severely affected while the number of affected animals in the control group increased. Between 30 and 60 days after first vaccination all remaining animals in the vaccinated group recovered. This favorable response led to stopping foot bathing and instead vaccinating the flock 2 weeks after a previous non-vaccinated flock of sheep was vaccinated in July 1995, at the height of the monsoon season. At this time there were 88 affected animals (14.6%) in the flock, and all had already been treated with ivermectin. Infections began to heal within 1 week of vaccination and almost all infections had disappeared by 30 days, at the time of the second dose of vaccine. No further occurrences of footscab were found in the flock after the initial vaccination. A single dose of vaccine was give to adults and two doses to the new lambs the following summer. No other footrot control measures have been applied in the flock, and it remains footrot free after a further 2 years. It is likely that only a single strain was originally introduced into this flock, which accounts for the success of the monovalent vaccine.

R.B. Gurney et al., Vet Journal 172 396-363, 2006

Influence of local anaesthesia on pain and distress induced by two bloodless castration methods in young lambs

Local lidocaine worked well for rubber ring castration. It only partially reduced the immediate pain response to Burdizzo castration, but did further reduce the cortisol response and abnormal active and postural behaviors.

Behavioral and cortisol responses were used as indicators of pain and distress. The sheep were assessed by observing orifice bleeding or rubber ring castration with or without local anesthesia. A total of 70 lambs aged 2 to 7 days were used and randomized into 6 groups - handling only, Burdizzo (exuvia cord crushed twice for 10 sec, 0.5 cm apart) or rubber ring (situated between testes and teats), with or without anesthesia. The local anesthesia was supplied with 4 mg/kg of lidocaine 2% diluted in physiologic saline solution to a final volume of 5 ml and injected into each spermatid cord (1.5 ml) and subcutaneously around the scrotal

Virulent footrot appeared for the first time in Bhutan after importation of sheep from Australia in 1989. Lush improved pastures and a monsoon season were ideal for spread of Dichelobacter nodosus to susceptible animals. Initial control efforts centered on foot bathing (copper sulfate and formalin, later zinc sulfate) and systemic antibiotics. Whole flock vaccination with a commercial multivalent vaccine was also employed, but it is known that the multiplicity of antigens in this product interferes with the immune response and that it persisted in the Bhutan flock 10 years after introduction. For this study, animals were identified as infected by tipping them up and examining all 4 feet. Affected animals (score of 2 or greater) were marked but remained in their original management group (rams, ewes, or weaners) on the farm. Cultures were obtained from the 50 animals with a foot-scab score of 2 or greater, and the hoof pathologists made diagnoses for anaerobic incubation. All 50 yielded Dichelobacter nodosus and isolates were subcultured on 2% hoof agar, then hypoxanthesized. The samples were sent to Sydney, Australia for serotyping. Forty of these isolates were successfully regrown and all were confirmed to be serogroup B. An autogenous monovalent whole cell serogroup B vaccine was prepared by emulsifying the cells in Montanide oil, to achieve a final preparation of 5 x 10^8 D. nodosus cells/ml vaccine. In a pilot study, 28 previously infected sheep were vaccinated with 1 ml of vaccine SC at a 30 day interval or left as controls. By the time of the second dose, vaccinated animals were much less severely affected while the number of affected animals in the control group increased. Between 30 and 60 days after first vaccination all remaining animals in the vaccinated group recovered. This favorable response led to stopping foot bathing and instead vaccinating the flock 2 weeks after a previous non-vaccinated flock of sheep was vaccinated in July 1995, at the height of the monsoon season. At this time there were 88 affected animals (14.6%) in the flock, and all had already been treated with ivermectin. Infections began to heal within 1 week of vaccination and almost all infections had disappeared by 30 days, at the time of the second dose of vaccine. No further occurrences of footscab were found in the flock after the initial vaccination. A single dose of vaccine was give to adults and two doses to the new lambs the following summer. No other footrot control measures have been applied in the flock, and it remains footrot free after a further 2 years. It is likely that only a single strain was originally introduced into this flock, which accounts for the success of the monovalent vaccine.

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Editorial (cont'd)

that the environmental stability of this organism has allowed it to build up over the 20+ years of popular cameld feeding in the U.S., and that together with certain management practices such as overcrowding, co-housing of camels and adults, overseed of certain pastures, and mixing stressed camels from different locations, has lead to a real increase in clinical cases.

Eimeria macusaniensis follows the typical coccidian lifecycle, requiring 15 to 21 days on the ground for oocysts to sporulate, having multiple rounds of replication within the host, and primarily damaging the intestinal epithelium. The severity of clinical disease relates to host immunity and diet. Lightly infected, immune competent camels may transiently shed small numbers of organisms, but will show no signs. Immune compromised or immunosuppressed camels, such as stressed adults or all crias, confronted with a large or overwhelming dose, may succumb to fatal disease in as little as 3 weeks, or as long as 2 weeks before oocysts appear in the feces. If infected, untreated herd appear to be less susceptible than ones introduced later, for example for breeding. The major signs of severe disease are those of weakness and wasting. Unless the camelid is weighed frequently, the owner frequently notices nothing wrong until the camellid collapses. Diarrhea is uncommon, except in crias. Hypoproteinemia is the major blood abnormality. Clinical abnormalities will be more comprehensively described in a soon-to-appear scientific report.

The combination of lack of specific GI signs and a negative fecal examination makes the infection easy to miss. We consider all ill-thrift camels to be suspect, and either treat empirically or perform multiple fecal examinations at least a 2 week period. Even then, shedding is often light (<100 oocysts/g) for the first week of patency, even in camels with overwhelming infections. Considering that most of the anticoccidial medications available in the U.S. are most efficacious against the earlier stages of the organism, delaying treatment until clinical signs are unlikely to be effective is a serious error.

It is more difficult to decide what to do with non-clinical shedders and their herdmates. As with other internal parasites, in general we acknowledge their presence and try to control them, not eliminate them. The long patent period, together with the pelleted camelid feaces, offers the potential for timely measure removal to prevent contamination. We believe the thick wall of the organisms imparts extreme environmental resistance, so leaving paddocks and pastures empty is of less benefit than with other GI parasites. Radical soil treatments such as burning and topsoil removal have been tried, but with little to no weight loss/good body condition, normal albumin, normal pelletes) but usually housed with juveniles and/or crias.

Answer: I think if you're just getting a few E. mac in otherwise healthy animals, you just have to keep your eyes open to it like other coccidia. You need to check the herd for overcrowding, feeding off the ground, mixing youngsters with adults, and other similar factors that promote eimeriosis, and be aware that it is in that order of importance that a herd has that many of the pro-eimeria factors, the problem can balloon relatively quickly.

Chris Cebra, Oregon State University

Editor's note - see Dr. Cebra's editorial on clinical E. mac infections on this and the preceding page.

Carpal hyperextension in a cria

Question: Yesterday I saw a 1 week old alpaca cria with bilateral carpal hyperextension present since birth and not improving. The carpal is normal to palpation, no effusion or pain on manipulation. Radiographs show no apparent carpal bones. The radiocarpal joint may be subluxated and the distal radius may be curved more than usual. I am wondering if this is a normal variant to expect and if so, how should I treat it? Any ideas from someone who has dealt with this before?

Answer: I have seen it in alpacas several times and have minimally recommended the dam and cria to be in a box stall. Ideally, the cria should be back in a simulated “in utero” nursing. This allows the tendons to contract “naturally”. The last thing you need is to flex the legs and give them exercises. This is because of greater awareness, better detection methods, and possibly higher case attack rates. It is my belief

LaBlue Johnson, Colorado