



Deformed Lambs

Dr. J.D. Bobb

Cache Valley Virus (CVV) sounds like a new and exotic disease, but recently several Midwestern flocks have had deformed lambs born that were the result of CVV infections.

Cache Valley Disease is caused by a virus which is carried by insect vectors. CVV was first isolated from mosquitoes in Cache Valley, Utah in 1956. The virus is widespread in the United States occurring in at least 22 states.

Cache Valley Virus causes lambs to be born deformed, as well as increased numbers of stillbirths, mummifications and weak lambs. There are lesions in the nervous system as well. The name given to the deformed lambs is arthrogryposis and hydrocephalus, meaning the legs are either flexed or extended in rigid positions and there is also a fluid filled space in the brain.

Producer concern is increased because the deformed lambs grossly resemble lambs affected with spider lamb syndrome, a genetic defect in Suffolk sheep. Cache Valley Virus is seen in any breed of sheep and in several species of mammals, including cattle. CVV causes lesions on the central nervous system, which are not seen in spider lambs. It is also believed that CVV may cause infertility due to embryonic death, re-absorption and early abortion.

It is not known how wide spread the virus is at this time. Producers should be aware that deformed lambs may be the result of a CVV infection and not a genetic problem especially when seen in a whiteface sheep breed.

Other diseases which can cause lambs to be deformed are Border disease, Blue Tongue Virus, Spider lamb syndrome, toxic plants and Akabane Virus. Akabane has not been reported in the United States. The flocks that have been infected represented several breeds. Exposure to mosquitoes or midges in early pregnancy is a common history to each of these flocks. The incidence of this disease is low at the present time. Infected flocks have been reported to have up to 18.5% of lambs affected.

If you have deformed lambs, send them to your State Diagnostic Lab along with the placenta and a complete history.

Strategic Smart Worming

Dr. J.L. Goelz

1. Two populations of parasites—one in sheep and immature stage on pasture waiting to infect sheep.
 2. Life cycle is 21 days—if you deworm sheep and turn back out onto the same pasture they will be infected.
 3. Two types of dewormers—
 - A. Purge—white worms, levamisole
 - B. Persistent—ivermectins
 4. Having sheep off feed for 24 hours increases the effectiveness of dewormers
 5. Dewormers kill adults not the eggs. If you keep them in a dry lot for two days post deworming, viable eggs will be dropped in a dry lot, not in the next pasture.
 6. Pasture rotation—the more frequent, the better.
 7. Cleanliness of pasture in terms of larvae is directly related to how long it has not been grazed by sheep.
 8. Never underdose!! This encourages resistance.
 9. Resistance is directly proportional to the frequency of deworming.
 10. Bottle jaw is a symptom of low blood protein. The number one cause of low blood protein is heavy parasite load.
 11. Bottle jaw is variable and should not be used as a measure of success (or lack of) a dewormer.
 12. Dectomax injectable is the most persistent dewormer available and fits well when we need to go back to an infected area.
 13. Internal parasites move freely between sheep and goats.
 14. Internal parasites do not move between sheep and cattle or sheep and horses.
 15. Iron is not the rate limiting step in red blood cell production. Iron is unnecessary in treating sheep recovering from heavy parasite load. Deworm and provide good nutrition in a dry lot.
 16. Young lambs on pasture are at high risk for parasites (immature immune system)
 17. Success or resistance should be measured by fecal egg count 4-10 days post deworming.
 18. Ivermectins are effective against immature stages hibernating in the abomasum.
 19. Larvae are killed by freezing and drying. They survive best in heat and humidity.
 20. Sheep rarely get infected with parasites in a dry lot.
 21. Hibernating parasites become more active, mate and produce eggs near lambing.
- Deworming ewes in the lambing pens is an effective method of preventing infection in lamb.

?’s with Doc Kennedy

Question: I am planning on purchasing Cydectin from you but I have not used this product on my sheep before and I wanted to know if it is safe on pregnant ewes. They were bred October/November. Also, I have noticed a new product out in Australia called Zolvix that was released this fall and supposed to kill 99.9% of worms. Are you going to be carrying it and/or has it reached the states yet?

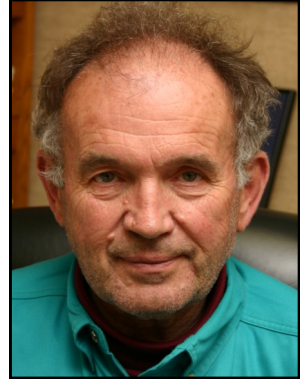
Answer: Cydectin works well. Pregnancy is not a problem. The Australians have always had products unavailable to us. Sometimes they eventually become available, more often they don't.

Question: What wormers are recommended for heavy pregnant ewes?

Answer: Ivomec, Cydectin, or Levamisole. Any one of these would work. If close to lambing, wait until they lamb.

Continued on page 4

It was the day before New Year's and a blizzard was on the way, so it was time to clean my office. I came across a February 1991 issue of the Sheep Newsletter. Sometimes things change, sometimes nothing changes. We are re-printing a Straight Talk article and Dr. Bobb's article on deformed lambs. I have changed my procedure at the time of docking and castrating to use 1cc of aqueous pen and 1cc tetanus toxoid mixed together as one injection.



Recently at various meetings I have been emphasizing the need for colostrum, particularly the amount to be fed to meet energy requirements the first 24 hours after birth. In a recent update by David Mellor, a veterinary physiologist with Massey University in New Zealand, he discusses meeting the colostrum needs of newborn lambs. His work shows that an 11 pound lamb born outside needed 35 ounces of milk the first 18 hours of life. My recommendations were 50 ounces for an average size lamb the first 24 hours. These figures should give producers an idea of how much colostrum should be fed. Know the approximate weight of your lambs and don't over extend the stomach by force feeding. Keep in mind the average producer has a tendency to underfeed. The first feeding of a lamb known not to nurse should be in the six to eight ounce range depending on the size of the lamb.

Another item of interest taken from the article indicated that when feeding orphan or sick lambs it is not wise to give more than 50ml/kg on each occasion; this would be eight ounces for a ten and a half pound lamb.

Seven ounces of colostrum are essential to protect against disease, particularly diarrhea. Therefore, it is important that lambs to be fed on milk replacer should receive a minimum of seven ounces of colostrum the first day to reduce the risk of gut and other infections during early life.

Colostrum can be conveniently stored in plastic soft drink bottles that must be sealed before frozen storage. Deep frozen ewe colostrum does not deteriorate for at least a year. Before feeding, the colostrum should be heated slowly in warm, not hot water, to body temperature. Thawing colostrum in a microwave should be avoided because antibodies may be damaged.

WATERY MOUTH. What is it?

It is a term given to very young lambs 24 to 48 hours old suffering from E. coli scours. They become depressed, salivate excessively and the scours are so liquid that often the only sign is a wet tail. Once this disease gets started, death losses can be extremely high, sometimes 100% of lambs born, if untreated or not treated properly. My regime for treatment involves letting the lamb nurse then treat orally with an antibiotic either spectinomycin or gentocin. If these drugs fail to work then an antibiotic sensitivity can indicate the proper drug. Treatment of animals already showing symptoms involves using antibiotics and oral electrolyte products but is generally unrewarding.

Now is probably a good time to discuss tetanus. There are several regimes out there which is generally an indication that some of them are not as effective as they could be. Several approaches are used. One of the more popular approach is vaccinating the ewe prior to lambing with a product containing tetanus toxoid such a Covexin-8. Supposedly this procedure protects against tetanus in the lamb. I have a difficult time accepting that this procedure could be totally effective. There are considerable amounts of variables including conditions of ewes when vaccinated and amount of colostrums consumed by the lambs. I am also questioning just how much immunity is transferred and for how long. Obviously, I am uncomfortable with the procedure. The benefits are that it is relatively inexpensive and is easy because ewes are being vaccinated anyway.

Another procedure that is still used that I thought was outmoded 30 years ago is the use of antitoxin at the time of castrating or tail docking. This procedure is cost prohibitive if adequate dosage is used. The product is derived from horse serum so an anaphylactic reaction is always a real possibility.

The procedure I use involves incorporating tetanus toxoid with long acting penicillin given at the time of castrating and docking. When bands are used I repeat the injection in seven days. I've found this procedure to be very effective and cost effective.

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Veterinary services, procedures, biologicals, and drugs mentioned in this publication represent the personal opinions and clinical observations of the contributing author. They are in no way intended to be interpreted as recommendations without the consent of the producers own practicing Veterinarian. We strongly urge that producers establish a patient-client-veterinarian relationship that allows extra-label use when there are no drugs approved for treatment or if approved drugs are not effective. This procedure allows veterinarians to go beyond label directions when "prudent use" is necessary. The limited availability of drugs and biologics in this country is a major factor in restricting the growth of the sheep industry and allowing producers to compete in the world Market place.

?’s with Doc Kennedy continued...

Question: I am a mixed animal practitioner in SW Michigan and have been asked by a local sheep producer about pneumonia vaccines for the spring lamb crop. Because the market is great right now, they are wondering if they should consider adding a commercial 'pneumonia' vaccine to their spring shots...as cheap insurance? I've only just 'struck out on my own' but previously have worked as a corporate veterinarian and I am looking for some guidance on what respiratory problems we are seeing now, and what we expect to see in the future based on what they have been seeing in the recent past. An Extensionist from Maryland and Montana, as well as Michigan have responded, but I have been told that you and the staff at Pipestone are really the guru's on this.

My specific questions are: Are you seeing any 'unusual' (above the baseline) respiratory problems in flocks recently (1-2 yrs)? Are you currently recommending PI3f in meat lambs for producers who are experiencing isolated flock or farm breaks? Do you find the PI3 efficacious if anyone is using it? Are you having any success in preventing or reducing the number of respiratory breaks with any of the cattle or other commercial vaccines. Have you had any success with 'autogenous' vaccines (viral/bacterial) for respirator problems or other?

Answer: I will be straight to the point. I don't believe there are any respiratory biologicals that are actually effective. There is one pastuerella bacterin that is licensed that I have used in my own flock and could not determine a benefit. I would suggest Nuflor as the drug of choice and simultaneous use of Draxxin as well. This provides immediate therapy and continued therapy. As you well know, early diagnosis and prolonged treatment to avoid relapses in respiratory conditions is essential. Sulfas in water for coughing may be helpful.

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