

DAIRY VETERINARY NEWSLETTER

May 2014

Utah Veterinary Medical Association Canyonlands Veterinary Conference

The Utah Veterinary Medical Association Canyonlands Veterinary Conference is coming up **July 10-12, 2014 in Moab, UT.** Early Registration ends June 23, 2014.

You can register online at: <http://www.uvma.net>, or more specifically:

<http://www.uvma.net/Events/CLVCInformation/tabid/105/Default.aspx>

There are presentations for large and small animal veterinarians on all days of the UVMA conference.

The Session titled Utah Department of Agriculture and Food and Utah State University/Washington State University, beginning at 9 a.m. on Saturday, July 12, includes:

Dr. Kerry Rood, Classic and Aberrant Fascioliasis - an update on the liver fluke problem that is growing worse with warming temperate climates including in Utah and the Intermountain West

Dr. Dave Wilson, Johne's disease, Mycoplasma and BVD Surveillance of Utah Dairy Herds and Changes in Herd Infection Status Over Time - signs of progress in control of mycoplasma and Johne's disease in Utah and the Intermountain West, and some new information regarding Bovine Viral Diarrhea

Dr. Arnaud VanWettere, WNV in Mammals and Birds - a Review - review of the current knowledge on West Nile Virus, focusing on clinical diagnosis, and description of the the recent West Nile virus outbreak in a Bald Eagle in Utah

Dr. Rusty Stott, Advances in Livestock Parasite Control - Dr. Stott just taught the parasitology course in the new veterinary school program at USU and will share some of the latest information regarding parasite control

Dr. Warren Hess, Updates from Utah Department of Agriculture and Foods

I hope you reserve your spot and we can see you at the conference.

Calf Hutch Ventilation During the Summer - Including Something We May Not Always Think Of

A recent article titled, “Calves with Sam: When is a vent not a vent?” appeared in the electronic newsletter from Dairy Herd Management, 5/20/14. It was written by Dr. Sam Leadley, a calf rearing consulting veterinarian.

The article can be viewed at:

http://www.dairyherd.com/e-newsletters/dairy-daily/Calves-with-Sam-When-is-a-vent-not-a-vent-260000721.html?utm_source=7344I2946023B7R&utm_medium=eNL&utm_campaign=Dairy+Herd+Netwo rk+Daily_20140521&utm_term=calf&utm_content=

The article starts out, “Two days ago I walked all the calves on a dairy in central New York State. They are housed in hutches with collars and tethered at the front of the hutch. At this time of the year the rear vents are opened. An auto-size tire is slid under the rear of the hutch. The combination of these two adjustments should be to increase air movement through the hutch.”

He goes on to describe that the temperature at that time was 87° F inside an unused calf hutch. Many of the hutches with the rear end propped up apparently had good air movement through them. Then he concludes, “However, more than a few hutches had the bottom rear vent space fully blocked with bedding. So, like any other protocol, folks need to be re-trained in the spring to adopt ‘summer-time’ bedding practices. Perhaps you have other seasonally-specific protocols on your dairy - remember that nearly every year workers need to be refreshed on correct techniques.”

I often look to see whether calf hutches are propped up in a tilted position or other steps are taken to improve natural ventilation through the hutches, but I don’t always look to see whether the gap created at the bottom rear part of the hutch is blocked by bedding. This is a good detail to remember to look for. (It is also very interesting at any time of year to go inside a few hutches and see what the temperature, wind and air quality are like for a calf inside.) It is certainly also true that seasonal changes in how things are done on dairy farms and in veterinary practices are always worth reinforcing and reminding employees about each year.

Antimicrobial Resistance: Global Report on Surveillance 2014

Veterinarians, whether in food animal practice or other types of work, sometimes become somewhat defensive about the issue of antimicrobial resistance. There is considerable evidence that the antimicrobial usage habits of human health care workers and patients are more directly associated with the increased resistance of many important pathogens to antibiotics than are the actions of veterinarians. Veterinarians are justifiably upset at times about FDA for example, intimating that farm animal antibiotic residues are largely caused by veterinarians. At a large conference I attended last year, many practicing dairy veterinarians that I know have intelligent clientele commented that a major part of food animal drug residues stems from the fact that a few producers still try to get away with whatever antimicrobial treatment of food animals they think will not be detected using current test methods. “This will not change until that attitude completely changes”, was a common theme.

However, the issue of alarming and continuing development of antimicrobial resistance in human pathogens

around the world affects all of us, including in ways that hit closer to home than our life as veterinarians. We all face the increasing probability that in a few years we and our family members, including parents, children, or grandchildren, may be more likely to die from untreatable infections that for approximately the last 75 years have been readily cured by antimicrobial therapy. However, there is also some good news regarding some pathogens and their remaining lack of resistance to some antimicrobials, including in the U.S.

The New Report from WHO 2014

The World Health Organization released a 257-page report in April 2014, titled “Antimicrobial resistance: global report on surveillance 2014”. Of course there is a large amount of information in such a report. I noticed some of the following:

- It is a true worldwide report, with information from most of the countries in the world
- Nevertheless, many countries did not provide data on all of the bacteria or antimicrobials studied
- Only 7 pathogens, of major importance in humans, were covered: *E. coli*, *Klebsiella pneumoniae*, *Staphylococcus aureus*, *Streptococcus pneumoniae*, nontyphoidal *Salmonella* spp., *Shigella* spp., and *Neisseria gonorrhoeae*
- Resistance studied included resistance to third-generation cephalosporins, fluoroquinolones, and carbapenems, the “last line of defense” antimicrobials against many human pathogens
- There were substantial differences among countries in percentage of isolates reported as resistant, and there was *no clear pattern* such as that developing countries were all alike, or developed countries were, and no pattern such that neighboring countries were alike either
- Most of the actual data in the report was from 2011 or before, with much of it 5 years old or older
- *E. coli* resistance to third-generation cephalosporins in the Americas ranged between 20% and 68% in most countries, 14.6% of 9443 isolates in the U.S.
- *E. coli* resistance to fluoroquinolones in the Americas ranged between 2% and 66% in most countries, 33.3% of 8992 isolates in the U.S.
- *Klebsiella pneumoniae* resistance to third-generation cephalosporins in the Americas ranged between 14% and 75% in most countries, 23% of 16,597 isolates in the U.S.
- *Klebsiella pneumoniae* resistance to carbapenems in the Americas ranged between 1% and 8% in all other countries in the Americas but was highest at 11% of 7932 isolates in the U.S. This was not explained, but suggests that treatment of *Klebsiella pneumoniae* in the U.S. may be shifting from the other classes of antibiotics to carbapenems.
- *Staphylococcus aureus* resistance to methicillin (MRSA) in the Americas ranged between 21% and 90% in most countries, 51.3% of 12,327 isolates in the U.S.
- Nontyphoidal *Salmonella* spp. resistance to fluoroquinolones was 0 of 2474 isolates in the U.S.
- *Shigella* spp. resistance to fluoroquinolones was 2% of 407 isolates in the U.S.

The report mentions the need for more collaboration between countries and “action across government sectors and society as a whole.” It also refers to animal agriculture, food-producing animals, the food chain, and food-borne bacteria, and continues, “Integrated surveillance systems would enable comparison of data from food-producing animals, food products and humans.” However, the report shows no antimicrobial resistance data from any food animals or food products, and makes no attempt to directly compare or link food animal antimicrobial sensitivities to human pathogen antimicrobial sensitivities.

It seems to me that this report shows some reasons for concern, and some for at least some encouragement. It also shows that despite no direct evidence of causality, the political pressure to reduce the types of antimicrobials that can be used in animal agriculture to protect their usefulness in human medicine continues.

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I also found it interesting that whatever else has been written or said, it can be seen that many European countries that have more regulations regarding drugs that can be used in food animals have lower percentages of these pathogens resistant to antimicrobials than other regions. I had never seen this kind of major human pathogen information from so many countries summarized in this way before.

The entire report can be viewed at:

http://apps.who.int/iris/bitstream/10665/112642/1/9789241564748_eng.pdf?ua=1

Please let us know your comments and also suggestions for future topics. I can be reached at (435) 760-3731 (Cell), (435) 797-1899 M-Tues, (435) 797-7120 W-F or David.Wilson@usu.edu.



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