From the Editor – Two important ag animal threats have arisen in the State of Washington recently. The first concerns a threat from the outside: Foot and Mouth Disease (FMD). Because Japan continues to have cases of FMD and because our state is so closely tied to Japan for trade, tourism, etc., extra vigilance on the part of everyone is needed to prevent entry of FMD into our livestock herds. In two articles, we’ll describe some prevention strategies and remind you what to look out for.

The second threat to our ag animal industries is internal. Because of mistakes or errors in the use of pharmaceuticals on a few farms and ranches and their resulting residue violations, closer scrutiny of our on-farm drug uses practices is occurring. No farmer intends to sell a market animal that is adulterated, and the numbers of violations are few in comparison to the number of animals marketed to slaughter each year – but the impact these residue violations have on our reputations cannot be overlooked. In another article, we’ll describe some of the reasons for residue violations and some resources and programs that can help producers identify weak links in the their drug use policies and procedures as well as some tools to help tighten drug use protocols.

Featured Faculty – Dr. Dale Hancock DVM, MS, PhD

Dr. Hancock joined the College of Veterinary Medicine in 1984. His background as an epidemiologist served him well while working in the Field Disease Investigation Unit. His research has focused on E coli and Salmonella in bovines, and how it transmitts within and between herds. Today his primary focus is teaching and helping vet students with research projects. Courses for which he is responsible include: Epidemiology, Foreign Animal Diseases and Regulatory Issues in Vet Med, and Nutrition. He has a passion for ag animal production and tries to instill the value of large animal medicine in every student he encounters, as well as provide them with as much exposure as possible before graduation through his Saturday Trips to sheep and dairy operations. He plans to retire in 2011 where he will travel back to where he was raised in Texas and continue advising when needed.
Ongoing Research at WSU College of Veterinary Medicine

Study to determine prevalence of failure of passive transfer and colostrum management practices on Washington State dairies. A recent national dairy study estimated the prevalence of failure of passive transfer (FPT) of immunity (serum IgG<1000 mg/dL) on US dairy calves to be 19%; however, the prevalence in Washington state is unknown. A WSU study is in progress (May to August, 2010) that will estimate the prevalence of FPT and its association with colostrum management practices on Washington state dairies. Preliminary results of the study show that, when using a serum total protein cutoff of 5.2 g/dL, 40% of the dairies where sampling has been completed (n=19) have a FPT prevalence of greater than 25%, and 33% of the calves sampled thus far (n=450) have FPT. Goals of this study are to improve colostrum management, and also identify herds for a future study to determine the effectiveness of a specific colostrum management plan to reduce FPT. Herds of all sizes anywhere in Washington are eligible to participate. If you would like to participate please contact Julie Caldwell (339-236-146 or jcaldwell@vetmed.wsu.edu ) or Dr. John Wenz (jrwenz@vetmed.wsu.edu or 509-335-0773).

Dairy Health Records Survey

We Want to Know more about health event record-keeping and evaluation on your dairies. Washington State University's Veterinary Medicine Extension will be surveying dairy farmers and veterinarians to learn more about how disease and treatment data are recorded, used and valued. Mail and on-line surveys will be available this month. Please plan to participate to help us better serve the dairy industry through the development of more efficient health data record-keeping and evaluation options. If you are a veterinarian working with dairy herds, please ask your clients if they received a letter and encourage their participation. Thank you! For more information or to request a survey, please contact Sandy Poisson 509–335–8225 or spoisson@vetmed.wsu.edu or Dr. John Wenz 509–335–0773 or jrwenz@vetmed.wsu.edu.

FMD Prevention in Swine, Sheep, Goats and Cattle by Dr. Dale Moore

In Japan, a private veterinarian found a cow with signs suspiciously like a foreign animal disease (FAD) and reported it to the local government’s veterinary service on April 9, 2010. An official veterinarian observed that the cow had a fever, salivation and erosions in the mouth but no other cows had clinical signs. Two more cases were found in the same farm on April 16 and the cattle were tested for bluetongue, bovine viral diarrhea–mucosal disease (BVD–MD), infectious bovine rhinotracheitis (IBR) and Ibaraki disease but had negative results on April 19, 2010. The veterinary service submitted samples to their national laboratory and the cattle were confirmed to be infected with foot and
m cases of foot and mouth disease (FMD) on April 20, 2010. All cattle on the affected farm were destroyed and the farm was disinfected. Movement restrictions within 10km (6.2 miles) around the affected farm were implemented and export of ruminants and products derived from the country was suspended. By the 15th of June, Japan had ten FMD outbreaks of serotype O. All susceptible animals were destroyed. The movement restriction around the outbreak in Saito city was lifted on June 13, 2010. Both pigs and cattle have been affected by this outbreak. (Adapted from the OIE website.)

Japanese animal health officials have allowed vaccination in combination with quarantine, test, cull and premise disinfection. It is believed that **people** are responsible for the spread of the disease in the country. From *The Mainichi Daily News*: “Noboru Kawakami, 57, a dairy farmer in the town, pointed to a mound in a corner of his yard. Underneath the mound covered with lime powder are 16 buried milk cows that were slaughtered following the outbreak of the disease. … Along with his 53 year old wife, his morning routine used to involve cleaning up the barns, feeding cattle and milking. "I still wake up at 5 am, but I've got nothing to do," he said.”

Such events remind us that we need to be vigilant in preventing disease entry into the state and onto our farms and ranches. What can we do? After reviewing all the biosecurity recommendations from USDA, state departments of agriculture, and extension websites, we found the top recommendations to prevent diseases from ENTERING the farm:

1. Closed herd or quarantine new herd additions? (Quarantine means keeping new animals separate from the rest of your cattle for two to four weeks before they have direct contact)
2. Have an area used only for the quarantine of new animals
3. Examine and test new additions for diseases or require testing prior to purchase
4. Perimeter fence or other farm perimeter control
5. Highly visible signs posted to restrict access to your facility
6. Require visitors to sign in when entering facility and disclose recent animal contact
7. Minimize animal contact with people entering your facility
8. Require clean clothing/boots for visitors and employees
9. Designated visitor/employee parking area – tire washing station in the face of an outbreak
10. Rendering pickup area designed to prevent rendering vehicles from bringing contamination to animal areas?

Also – you or anyone who has been in a country affected by FMD need to stay away from livestock for at least 5 days and make sure footwear has been disinfected. Despite these suggestions, a single set of biosecurity recommendations will not be appropriate for all farm operations, because even within a class of livestock, risks vary by the type of management. For this reason, on-farm risk assessment is likely the best starting point for educating producers about farm-specific risks for disease introduction and potential biosecurity breaches. For tools to help identify risks:


Sheep: [http://www.sheepusa.org/Biosecurity](http://www.sheepusa.org/Biosecurity)

Residue Prevention – It’s not just antibiotics!

By Dr. Dale Moore

Over the last year, FDA issued 29 violation letters to producers in the state of Washington for drug residues in market animals: swine, bob veal, beef and dairy market cows. Although most were for antibiotic residues, some were for anti-inflammatory drugs, such as flunixin (i.e. Banamine). Let’s go through some of the most likely reasons why we might see a meat residue with the drugs that popped up on the FDA list.

1) Bob veal with neomycin – The most likely reason for a residue is feeding a medicated milk replacer with neomycin to a calf that is going to slaughter. The medicated milk replacer label should read: “Warning: A
withdrawal period has not been established for use in pre-ruminating calves. Do not use in calves to be processed for veal."

2) **Swine with penicillin** – The most likely reason for a penicillin residue (since the withdrawal time for meat is only 7 days on the label) is use of an extra-label dose. If the dosage (number of cc's per pound) or the duration of use is changed, the withdrawal time has to change.

3) **Roaster pigs with gentamycin** – This antibiotic has a very long tissue half-life (the time it takes for half the tissue level disappears after giving a dose of the drug). The drug can be found in the kidneys for up to 18 months after an injection.

4) **Dairy Cattle with flunixin** – (Banamine, etc.) The most common reason for a residue from this anti-inflammatory drug is the improper route of administration. The label directs us to administer the injection IV (intravenously) but many people may give the drug incorrectly in the muscle (IM). When this happens, a much longer withdrawal time is needed before the tissues no longer have a residue.

5) **Dairy Cattle with Desfurloylceftiofur** (a metabolite of ceftiofur – e.g. Naxcel, Exceed, Excenel, etc.) – The most likely reasons for a meat residue with ceftiofur include an improper dose, duration or route of administration OR an inappropriate withdrawal period. The pre-slaughter withdrawal periods are: Excede – 13 days, Excene 1 3 days, Naxcel 4 days, Spectramast DryCow 16 days, and Spectramast Lactating Cow 2 days.

6) **Dairy Cattle with Sulfadimethoxine** (Di-methox, Albon) – Different formulations of this drug are available and the ones specifically focused on the correct class of animal need to be used. Meat withdrawal (for Albon if label dosages are followed) is 7 days. Not following the label recommendations can result in a residue.

7) **Dairy Cattle with Penicillin** – As with swine, a possible reason is an extra-label dose without an extended withdrawal time. Also, this drug is sometimes used as in intra-uterine infusion and withdrawal times might not be followed.

8) **Dairy Cattle with Tetracycline** – A likely reason for meat residues is the extra-label use for uterine infections as an infusion without a proper withdrawal time. Little data is available to support infusion as an effective treatment for metritis.

Avoiding residues can be accomplished by attention to the following:

1) Animal identification and, specifically, identification of treated animals – Good record-keeping!

2) Following the manufacturer’s label recommendations or veterinary prescription recommendations for each drug used.
   a. Drug goes into the animal that needs it.
   b. Animal gets the right dose based on body weight.
   c. Drug is used for the labeled number of days (duration of use).
   d. Withdrawal time on the label is followed before the animal is marketed.
e. Drugs are not used off-label unless a prescription, veterinary-client-patient relationship and withdrawal time exists.

3) Learn about the drugs used on the farm. Provide drug use training for each person responsible for treatment including medication put in calf milk or milk replacer or feed, and each injectable, topical and intramammary treatment used on the farm or ranch. Read the labels.

Another note – We recently heard of a pig farmer selling pigs for 4H projects and recommending an antibiotic to the people who bought the pigs that WAS NOT APPROVED FOR PIGS and was, instead, a cattle drug. This is in strict violation of the regulations on extra-label drug use because farmers, ranchers, or their employees do not necessarily have training in pharmacology. However, the veterinarian can serve as a resource on proper drug use and withdrawal times and can provide guidance and monitoring of treatment protocols. Veterinary Medicine Extension has some resources available online. For dairy cattle: DairyBeef: Maximizing Quality and Profits at http://dairybeef.wsu.edu

It’s Fair Season!

Fairgoers across the state head straight to the animal exhibits. Because most folks don’t have livestock or poultry, farm animals are wondrous creatures to children and adults alike. Our 4–H and FFA members take great pride in exhibiting their animals in shows and to the public and spend a great deal of time and effort to get those animals ready. So, when it comes to vet check time, some exhibitors are greatly disappointed if their animal is excluded from exhibiting because of a contagious condition. Orf, club lamb fungus, cattle ringworm, foot rot... These are just some of the conditions for which the fair veterinarian or fair board might exclude an animal from exhibiting. The vet check serves to identify those obvious conditions that can be transmitted to other animals.

For pictures and descriptions of possible conditions for which an animal might be excluded, go to: http://vetextension.wsu.edu/programs/4–H/index.htm. There you will find factsheets for diseases of swine, sheep/goats, and cattle. These handouts can be printed and used by fair boards for volunteers who help the fair veterinarian identify animals to be excluded. Although these handouts do not have EVERY condition for which an animal might be excluded, they do give a broad view of important
What’s New at WADDL? – Puzzling Cases of Baby Beef Calf Pneumonia

By Dr. James Stanton

Over the past several winters (Jan–March; 2008–2010), we have had several accessions from 1–2 day old beef calves with similar histories and lesions. The history includes a <1–2% mortality in the calves, with the dams remaining unaffected. The affected calves are often born normal, but their clinical condition quickly deteriorates, resulting in death in 12–36 hours. Respiratory signs are the main clinical findings and gross lesions mainly consist of consolidated lungs, often with emphysema or bullae (air bubbles or blowouts in the lung tissue). The uniqueness of this syndrome is that histologically the lungs have the distinctive findings of peribronchial lymphoid hyperplasia/follicular bronchiolitis (a specific kind of white blood cell found proliferating around the respiratory tree as the inflammatory response). Often, the pneumonia is associated with intraalveolar multinucleated cells. This chronic histologic lesion indicates that something is happening to the calf in utero to trigger the inflammatory response. To date, these animals have tested negative for a variety of suspected pathogens, and the cause is currently unknown. This syndrome has been primarily seen in a relatively small geographical area in Montana; however, suspect cases have been identified in Idaho and Oregon. If any similar cases are identified, it is recommended that veterinarians submit the entire calf for necropsy, or if that is not possible, a complete set of fresh and frozen tissues is recommended. For accession forms and lab information, go to: http://www.vetmed.wsu.edu/depts_waddl/

WSDA Corner – State Veterinarian – Dr. Leonard E. Eldridge, DVM

Foot & Mouth Disease Update: Earlier this month the Hawaii State veterinarian issued an alert for all visitors coming to Hawaii to be aware of the outbreak of the highly contagious Foot and Mouth disease (FMD) in Japan. Foot and Mouth disease affects animals like cattle, swine, and sheep, not humans. The virus however, can be easily transmitted through clothing and shoes and can live for days in both animal and human nasal tissues. Unsuspecting travelers can transport the disease quickly to non-infected animals. Because this disease is highly contagious and can live for days outside of a host, it concerns me. Washington is a gateway trading state, connecting Asian trade to the U.S. economy; about seventy percent of international goods entering Washington are destined for the larger U.S. market.

Washington’s Puget Sound seaports move large volumes of imported manufactured goods that are shipped in containers from Asian trading partners. The ports of Tacoma and Seattle, combined, are
among the top three marine container cargo complexes in North America, handling 8.2 percent of total U.S. container traffic. About 76 percent of all international containers arriving at these ports are transferred to rail and delivered to the Midwest and/or the East Coast. We also get a lot of visitors that travel from Asia to different destinations in Washington; there is always the potential for one of these visitors to unintentionally carry this highly contagious disease.

The current outbreak in Japan is in the Miyazaki Prefecture on the Southern island of Kyushu where they have already euthanized some 35,000 cattle and pigs. I expect numbers to go up into the hundreds of thousands as they mobilize more people in the field to control this outbreak. The U.S. Department of Agriculture has also issued a ban on beef and pork products from Japan. I wouldn't want visitors to bring in any beef or pork products that are prohibited and I am asking you to alert other ranchers if you get visitors to your operations from one of the FMD outbreak regions of Japan and Korea. You will want to ask if they have visited disease outbreak areas. Visitors will understand the extra efforts you are taking to protect our resident animals from this disease. For those traveling to Japan and Korea, do not visit farms or ranches until the outbreak is over. Travelers are also being asked to avoid contact with livestock or wildlife for five days prior to and after returning home from these regions.

WSDA Animal Services is taking additional biosecurity precautions by issuing disposal footwear that can be changed between visits as our staff travel from ranch to ranch. Below is a short list of biosecurity precautions that all of the cattle industry can use to assist in protecting their operations:

1) Know the source of incoming animals and do the required testing before the animals reach your ranch, feedlot, or dairy.

2) Isolate newly purchased animals from resident animals for at least a week, and preferably 2 weeks. Feed and care for those animals after you have cared for all your other animals first. Do not allow common watering and feeding areas.

3) Pay close attention to who enters your yard. Get to know employees and learn about any outside activities relating to the health of your animals. Do they keep animals of their own, or do close family members work for other animal operations? Keep a visitor log and inquire if visitors have been in foreign countries or a disease outbreak area within the previous two weeks. Politely refuse admittance to your ranch, feedlot, or dairy if you feel uncomfortable with their answers or they are reluctant to give travel information. Consider disposable footwear for visitors or disinfecting shoe mats.

4) If you exhibit animals at a fair or show, make sure you have discussed a vaccination protocol with your herd veterinarian. Isolate returning animals as in #2 above.

5) Don’t allow rendering transport vehicles into feeding or housing areas. Consider having a designated, easily disinfected, pickup spot away from other animals.

6) Become familiar with service personnel (feed representatives, feed trucks, equipment service personnel, etc). Ask them to wear protective disposable boots and make them aware of your efforts to protect your animals.
Nonambulatory Livestock: In Washington, it is a crime to transport OR accept delivery of nonambulatory livestock to, from, or between any livestock market, feedlot or slaughtering facility, or similar facility that trades in livestock (RCW 16.36.116 and RCW 16.52.225). Nonambulatory is defined as “cattle, sheep, swine, goats, horses, mules, or other equine that cannot rise from a recumbent position or cannot walk, including but not limited to those with broken appendages, severed tendons or ligaments, nerve paralysis, a fractured vertebral column, or metabolic conditions” (RCW 16.52.225(4)). This violation is either a gross misdemeanor punishable by a maximum fine of $5,000.00 and one year in jail; enforced by local law enforcement; or a civil infraction punishable by a maximum fine of up to $1,000.00; enforced by WSDA. Both the transporter and the receiving facility may be subject to the penalty. Transporter can be defined as the livestock owner, hired transporter, or both, and the receiving facility can be defined as any employee or agent of the livestock market, feedlot, or slaughtering facility. The transport or acceptance of each nonambulatory livestock animal is considered a separate and distinct violation (WAC 16–92–020).

If livestock arrive at a receiving facility in a nonambulatory state, that animal is to be immediately and humanely euthanized. One exception is livestock that was ambulatory prior to transport to a feedlot and becomes nonambulatory because of an injury sustained during transport may be unloaded and placed in a separate pen for rehabilitation at the feedlot (RCW 16.36.116). Please note that this exception only applies to feedlots. If livestock unload in an ambulatory state, but later become nonambulatory, the receiving facility is responsible for the humane treatment of that animal. Upon discovery of non-ambulatory livestock, further transport of that animal to, from, or between any livestock market, feedlot or slaughtering facility, or similar facility that trades in livestock is prohibited.

Downer or nonambulatory candidates may exhibit the following characteristics:

- **Sick** – Fever greater than 103 degrees; drug residues;
- **Thin** – Body conditioning score less than 2.0;
- **Ocular** – Cancer eye, blind in both eyes; or
- **Pain** – Fractures, lameness (score 4 or 5), peritonitis.

**DO NOT TRANSPORT -- CONSIDER ON–FARM EUTHANASIA**

For euthanasia guidelines, refer to the American Veterinary Medical Association website:


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**Continuing Education**

**Veterinarians**

**Veterinarian Online CE for Official Trich Testing**
To take the course and receive certification, go to:
[http://vetextension.wsu.edu/programs/bovine/trich/index.htm](http://vetextension.wsu.edu/programs/bovine/trich/index.htm)

**Veterinarian Online CE for TB Testing Certification**
To take the course and receive certification, go to:
Academy of Dairy Veterinary Consultants Fall Meeting: October 2010


Producers
For Market Cattle safety and Quality, Go to our website DairyBeef: Maximizing Quality and Profits at [http://dairybeef.wsu.edu](http://dairybeef.wsu.edu)
You will also find Spanish educational materials on dairy market cattle.

4-H Leaders
Disease Prevention and Quality Assurance Volunteer Leaders Online Program
[http://vetextension.wsu.edu/programs/4-H/index.htm](http://vetextension.wsu.edu/programs/4-H/index.htm)

State 4H Fair – Find on the VME homepage! [http://vetextension.wsu.edu/](http://vetextension.wsu.edu/)

Send newsletter comments to the Editor:

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