

**Customer Appreciation Picnic** will be at the Chester Town Hall on June 18 from 11:30 to 1:30. We're catering it with J's Bar-B-Q (out of Ripon). Please RSVP to the clinic by June 14. Sorry, no carry outs will be allowed.

**Ampicillin Mixing and Dosing:** With new veterinarians and new clients, it's important to review drug mixing and dosing issues. The back of the ampicillin bottle has three different options for adding different amounts of water to produce three different concentrations after mixing. We have always used the 104.5 mL (cc) of water when mixing (we usually round to 105 mL). It is important that all team members mix at the same concentration. If a veterinarian tells you or an employee to give 35cc after a surgery, they are instructing to give 7,000 mg and if the drug is mixed differently, then the dose will be wrong. Incorrect dosing can create withdrawal issues if mixed too concentrated.



- We retail bottles with the correct amount of water in a bottle added as a convenience and to reduce dosing errors.
- We primarily use ampicillin once a day. Occasionally we may prescribe the drug twice a day, but the milk and meat with-hold are extended with twice-a-day treatment.
- **Last note: once mixed, ampicillin must be stored in the refrigerator. It is only stable for about a week at room temperature once it's mixed.** We used to store the bottles in the cooler even before they were mixed to get clients in the habit of storing correctly, although it is not necessary until the product is mixed with water.

**Emergency:** Please don't call individual veterinarians when you have a call, especially in the case of an emergency. If the vet you call isn't working or has their phone in their truck during an extended herd check, it may be hours before your voice message is received.

**Broken Needles:** The beef industry has an issue with the occasional broken needle showing up in steaks. I'm sure it's a serious turnoff and it's an issue that fake meat and lab grown meat will never address. It's so serious that the industry recommends that an animal with a broken needle in which the needle is not recovered should be sent to rendering and never enter the food chain. It's important to realize that needles are stainless so magnets won't recognize them.

Prevention is key. Never straighten out a bent needle, just grab a new needle. When using multidose syringes or whenever dealing with animals not very well restrained, make sure the needle has a metal hub. The plastic hub needles break off very easily.

**Cornell Mastitis Research:** Historically, the only treatment for mastitis that works has been antibiotics. And antibiotics haven't worked all that well either. The University of Cornell is working with a product called secretome which is naturally produced by udder stem cells and actually contains several biologically active compounds. The compounds have some antimicrobial function, minimize bacterial toxin effects, and enhance the local immunity and healing of udder tissue. The researchers are working with different types of stem cells and they are working on isolating specific compounds that elicit specific events. It's early, but this is great news for mastitis research and something that naturally occurs in the udder would eliminate antibiotic residue risks.

This is a picture of our newest milk lab submission form that is at the front desk. Either a web site form or this form needs to be filled out when samples are dropped off or mailed to our clinic.

The scenario is: Dad walks into the office with a blood tube, or maybe a tube with a yellowish fluid in it. "Junior wanted me to drop this off" is what he tells the office staff. Dad starts to walk out of the office and the office staff catch him (not always). Dad calls Junior, who doesn't answer, so Dad says I think it's for the down cow. Office assumes it's calcium and phosphorus test so they run the test. Office calls farm later in day, leaves a message that the down cow has normal calcium. Three days later Junior calls wanting to know if the unlabeled with no paperwork blood he sent in from a cow indicates if the cow is pregnant or not. Moral of the story is: if you provide no paperwork, we hold and don't run the sample until the paperwork is filled out. Sorry, but Junior wasn't happy that he got a \$39.50 bill for bloodwork on a pregnancy that he didn't get answers on. We just cannot run the samples unless we are certain.

WVS Milk Lab submissions

Client \_\_\_\_\_ Date \_\_\_\_\_

Contact info \_\_\_\_\_

Milk

Cow culture  
Routine  
Myco  
individual or comingle (pool)  
Prototheca

Blood

Name/Number \_\_\_\_\_  
Calcium  
Phos  
Electrolytes  
Other \_\_\_\_\_

Bulk Tank

Routine  
Myco  
Prototheca

Pasteurizer

Pre Post

Fecal

Fecal float  
Equine McMaster fecal  
Fecal Egg Count  
(small ruminants)  
Salmonella  
Entericheck

**The emergency of a down cow vol. 1 – Low Calcium 101:** When cows are unable to rise everyone reaches for the cow's ears to see if they are cold. The truth is the thin skin of the ears make them the ideal place to cool blood and ear temperature has little to do with low calcium. In addition to being a component in milk, calcium is also involved in muscle contraction. Low calcium reduces muscles ability to contract making it difficult for cows to rise. Muscle contraction is also involved in the GI-tract and urinary tract. Cows with low calcium often have the following supporting clinical signs:

- **Stiff manure** due to slowed GI transit time
- A **full bladder** due to inability of the bladder's muscles to contract and void
- Decreased rumen contraction - severe cases may **bloat** due to inability to burp off excess gas

When you observe a combination of these clinical signs treating with calcium is appropriate. A bottle of calcium may be given intravenously but will also be absorbed if given under the skin. An oral calcium bolus is appropriate if a cow has supporting clinical signs and is still standing, but wobbly. If a cow does not respond to calcium treatment checking blood calcium levels is a next step – pulling a blood sample **before** treatment is always a great idea. Classic milk fever happens shortly after calving as a cow is shifting her body's calcium supply into lactation, however low calcium can be at play with a variety of disease processes that may keep a cow down – for example: toxic mastitis and hemorrhagic bowel syndrome (HBS). Evaluating stage of lactation and other clinical signs will help determine cause and treatment - stay tuned as we take a more in-depth look at the down cow series – up next toxic mastitis.

\*Keep in mind - regardless of why a cow may be unable to rise keeping fresh feed and water in front of her, moving her to a bedded pack and sheltered area, and rotating her from side-to-side will greatly increase her chances of recovery.

*Be sure your cow cooling systems are ready to go, cleaned and the spray nozzles are not plugged.*