

Winter pinkeye:

Keep pinkeye in the back of your mind when young stock start to show watery painful eyes, often squinting or holding one eye shut. The organisms causing this disease have changed in the last 20 years, the vaccines are not as effective, and the organism appears to be more contagious. While flies are still a major cause of spread, we see calves with the problem in the dead of winter. Sometimes coarse hay in feeders may contribute, but animal to animal contact from rubbing also seems to be a problem. Also, continuous flow pens, where younger animals are added to a pen without every animal already in the pen being removed is a big contributor because there are undoubtedly animals that are carrying the disease that look fine left in the pen. Another one of many reasons for all-in all-out pen moves.

Tetanus:

I haven't touched on this subject in a number of years, but recently we observed a couple of animals with tetanus, so this is a reminder. Tetanus is a bacterial member of the clostridium family. The organism forms spores, and like velvet leaf seeds, the spores live in the soil for decades. The spores are introduced into dead tissue from the environment and the organism, while growing in the dead tissue where there is no oxygen, produces a very potent neurotoxin, and this causes the symptoms and death. In people, it is associated with puncture wounds where tissue deep in the wound dies and the organism is introduced with the object causing the puncture. I've seen it when a heifer gets a puncture wound in the foot, like a nail similar to what would happen in a person.

However, in cattle, we most commonly see it when people castrate bulls with rubber bands, and secondly when people dock tails with rubber bands. With tail docking, most people vaccinate three weeks in advance with a tetanus toxoid to boost the animal's immunity. With castration, most people don't use rubber bands, but use an open method of castration, usually with scissors and pulling, especially after they've lost calves to tetanus. You could pre vaccinate calves if after this warning you still want to use bands to castrate bulls.

The organism is associated with farms that have had horses at any time in the past, and equine owners routinely vaccinate their horses for Tetanus.

The disease is essentially economically untreatable in cattle.



Pushing cows



Cows move at 2 MPH, that's how fast they move comfortably, and people move almost twice as fast, so you need to slow down to have calm cows or get more injuries, especially at corners. Dogs move at about 10 MPH which is why in confinement or on concrete dogs are bad news for moving cattle.

Extra Lutalyse: We've known for a long time that a single shot of Lutalyse or Estrumate, failed to work in one in five cows. We could always see it with the ultrasound, and a few years back, grudgingly, the companies admitted this. This is significant, because it means that if you do everything else correctly, all the shots and timing, 20% of your ovsync cows won't work. But the UW dairy department has been doing a lot of work on improving this. The answer isn't a bigger shot of Lutalyse, it's two shots of Lutalyse, the second one 24 hours after the first.

Research Roundup:

Pneumonia and genomics:

A recent article in Beef Magazine, February 2016, discussed how the beef industry is using genomics to address feedlot pneumonia. This disease creates huge losses when animals are moved into the feedlot. In selecting for genomic susceptibility, which is only moderately heritable, we will probably be selecting for better immune systems, maybe better respiratory clearance rates, perhaps slightly larger lungs. No matter what the heritability of disease is, as long as it is positive, over time we can change an animal to limit the disease, and genomics will just speed up the process.

Naval infections:

Research on three different types of naval dip for newborn calves showed the same incidence of naval infection in all three groups. There was not a control group, ie a group with no dip at all. Naval infections were rated as pussy discharge, pain, enlargement, and ultrasound parameters. The really important factor was that calves with failure of passive transfer, ie failure to get adequate timely colostrum, were the calves at high risk in all three naval dip groups.

Egg Yolk antibodies:

This is an area with increased work especially as a crypto control measure. In the research, the egg yolk antibodies also improved respiratory health of the calves, probably by freeing up the immune system from concentrating on GI disease. Years ago I had a friend in the swine industry comment that the reason antibiotics in swine feed helped with pneumonia was that they controlled intestinal pathogens and thus allowed the immune system to focus on the lungs, because we knew the level of antibiotics getting into the hogs was not inhibitory of swine pneumonia organisms.

Included are two notes from National Mastitis Council, an excellent resource for Dairymen concerned with udder health.

Milking Unit Attachment and Alignment Important

The way milking units are attached to cows influences milking performance and efficiency. The liner stems(short milk tubes) should be bent over the claw ferrule to prevent air leakage into the claw. When attaching individual teatcups, lifting the teatcup toward the teat and allowing the liner stem to straighten will help minimize air admission into the system. Proper unit attachment will ensure that cows are not disturbed by excessive air admission noise during unit attachment, and that teat cups sit firmly on teats.

Before the milker moves away from each cow, the unit should be adjusted under the cow. The goal is to have the outlet of the claw pointed forward toward the cow's head in most conventional systems, or directly out between the legs in a parallel parlor. The claw outlet should point in a slightly downward directions to facilitate milk flow into the milk hose and away from the cow. In stall barn milking systems, the milk hose and long pulse tubes should come up to the line directly behind the cow's "armpit" to allow the best possible unit adjustment. Proper unit adjustment will minimize liner squawks, especially toward the end of milking, and contribute to good overall "milkability".

Milking Machine Factors Affecting Teat Condition, Cow Comfort And Milk Flow-Rate

From the paper "Understanding the Milking Machine: The Contribution of Cyclic Liner Compression to Effective Pulsation", NMC 52nd Annual Meeting Proceedings, pp.71-84(Mein, Reinemann and Thompson, 2013)

The major machine factors affecting teat condition and cow comfort are, in likely order of relative importance:

- ***Liner fit, or liner dimensions relative to teat dimensions (affecting liner compression, mouthpiece chamber vacuum)***
- ***Average claw vacuum level (main effects on teat congestion, hyperkeratosis, comfort)***
- ***Duration of cups-on-time (over-milking is linked with poorer teat-end condition)***
- ***Liner Compression(main effects on teat congestion and hyperkeratosis)***
- ***Pulsation settings (especially the b-phase duration and d-phase duration).***

The major machine factors affecting the average milk flow-rate per cow are, in likely order of relative importance:

- ***Average claw vacuum level***
- ***Pulsation settings(especially the true milk: rest ratio and b-phase duration)***
- ***Liner compression***