



From the desk of Dr. Leon Roggenbuck
May 1st, 2016

Miles deep in the ocean there are vents in the Earth's crust that spew boiling hot Hydrogen Sulfide gas. Water pressure is incredibly extreme, temperatures range from 2* Celsius to 400* Celsius. There is no light from the sun to fuel life...and yet the microbe has adapted to thrive in this environment. I believe the microbes on our dairy farms are no less adaptive and will always challenge us as we work to provide our livestock what they need to out maneuver a plethora of highly adaptive pathogens, bacteria and viruses.

The first of May is a good time to consider one of these microbes, *Salmonella Dublin*. *S. Dublin* is an increasingly common pathogen of dairy calves that we see in the summer months here in the Thumb of Michigan. *S. Dublin* has adapted to exist in a carrier state in dairy cattle. Infected cattle can recover and continue to shed *S. Dublin* for many months to years.

A typical *S. Dublin* outbreak looks like this:

A pen of weaned calves, 2 – 4 months of age, is noticed to have a few pneumonia cases. Treatment of these calves is largely unsuccessful. A week goes by and several die and several more become sick. Post mortem reveals pneumonia, but also a swollen liver and yellow fat (known as Icterus) due to liver failure. By this time several more calves are obviously ill and fail to respond to treatment. Rectal temps of the normal looking calves reveals that 80% of them have high temps (103* - 105*). Now it is obvious that we should have treated the entire pen a week earlier. Remember this bug has adapted to live in these calves. What we eventually see as dead pneumonia calves, actually started weeks earlier as an infection of multiple organs in a large number of calves. As the summer progresses, flies carry *S. Dublin* from calf to calf out in the hutches and losses escalate.

This scenario has prompted us to respond very aggressively to the first case of *S. Dublin* that we see. Mass treatment of all calves (not just the sick ones) with Baytril is the first emergency step. This will save many calves that are at the early stages of infection and tremendously decrease shedding.

Aggressive fly control throughout the entire farm will decrease the ability of *S. Dublin* to spread. Premise spray of barns and hutches together with pour on insecticide on the animals is the key. Exit Gold is one example of a pour on fly control product. It can be ordered on drop ship and used at a maximum cost of 44 cents per adult cow. Calves are obviously a fraction of that cost to treat. Numerous testimonials from clients tell me it lasts about 3 weeks. I believe we have a financial incentive and moral obligation to control flies on our dairies and the month of May is the time to start when you only have a few flies.

Vaccination with Intervene D is the next step. We are currently doing this with two doses administered in the milk, 21 days apart. We start as early as day one. This is off label, but appears to work with little side effects. Subcutaneous injection of this vaccine is known to be hard on young calves.

Due to the host adapted nature of *S. Dublin*, which allows for persistent infection, we are not convinced it is practical to eliminate it from your dairy. This aggressive approach to an outbreak followed by continued fly

control and vaccination of young calves seasonally (March through October) has been a gratifying approach to controlling *S. Dublin* on our dairies. Please know that while an ever adapting world of microbes is finding opportunities to live on your dairy we in the veterinary profession will be striving to help you adapt against them.

Enjoy your summer. Dr. Leon

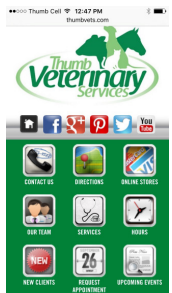
Biggest bang for your buck!

Why shop with us? Because we are honest in our pricing. We shop around for you, selecting the brands that you prefer from the supplier with the best price on the day of purchase. TVS offers multiple shopping solutions for your pharmaceuticals and supplies and it is our goal to be very competitive in pricing. We purchase only from reputable suppliers buying meds and supplies that are backed by the warranties of the manufacture. Scripted products still require a valid veterinary client patient relationship and we have to approve the sale to you.

Purchasing over the counter at the clinic or from a vet truck is the most expensive way to purchase through us because of the labor necessary to keep those items stocked.

Our online store (www.thumbvets.com—online store tab) is another option that we offer to you. These products are not only priced lower than what we stock in house but there is also a larger selection. The majority of items ship for free. You are able to shop from the comfort of your home, or from the barn if more convenient. You do have to create an account and payment is required before the order is placed.

The Drop Ship Program was implemented in 2002 in an effort to bring the highest quality pharmaceuticals and supplies to our clients at the best price and in the most timely manner. Orders are placed with the clinic office staff (810-376-2425) and arrive at your farm in 1-2 days. All accounts must remain current to participate in this purchasing option which gives you the best pricing that we can offer.



FINAL PRODUCER MEETING TILL FALL!

Wednesday 5/4/16 Calving

Times: 5:00 pm

Topic: Hands on calving experience

Presented by doctors at Thumb Vets

**Place: 60 E. Miller Rd, Sandusky,
48471**

Light lunch provided.

Spanish is available.

**R.S.V.P. to 810-376-2425 or via text to
810-404-9320**

Visit us online, www.thumbvets.com