

**E**mma grew up in the northern part of New Jersey. She developed an interest in veterinary medicine by working at horse barns in the area and shadowing an equine vet. She completed her undergraduate degree in Animal Science at Clemson University in South Carolina. She was very active in the dairy science program and enjoyed showing heifers and traveling to conferences throughout the southeast. She also competed with the equestrian team. She spent four months studying abroad in Costa Rica, where she finished up a minor in Spanish.

Emma went to vet school at the University of Tennessee in Knoxville where she focused on dairy medicine. Her hobbies while at school included hiking in the Smoky Mountains, caring for the animals at a professor's hobby farm, and practicing with the Palpation Team. After her second year of school, she spent three months in South America, mostly backpacking but also doing some veterinary work. She worked with *Bos indicus* cattle at a bull collection facility in Colombia and learned about breeding soundness exams and semen handling/storage. In Peru she worked with alpaca farmers on ways to improve the health and productivity of their animals. Wrangling semi-feral animals at 14,000 feet served as great character building and sparked an interest in camelid medicine and surgery.

Her biggest interest is dairy production medicine (especially calf and transition cow management). She also enjoys working with goats and sheep and wants to be involved with both production and hobby farms in the area. She is especially looking forward to helping owners develop efficient deworming, vaccination, and reproduction management strategies. She also has interests in equine reproduction, dentistry, and preventative health.



### ***Small Ruminant Breeding Soundness Exams:***

*Our clinic is now offering breeding soundness exams for rams & bucks. The test includes an evaluation of the reproductive organs, and a semen evaluation to look at morphology & motility. If there are abnormalities, you will know that he is not a breeder before the breeding season begins. The only thing we cannot test for is libido. The evaluation is done on-farm, and requires a way to restrain the animal during collection.*

### Tetracycline reminder:

Again, be sure you are observing milk withdrawal times for tetracycline products as milk is about to be tested at much lower levels than the prior screening tests picked up. "I always did it this way and never had a problem" is not a defense when the FDA changes tests and you have an illegal residue.

### **Naval dip research:**

Dipping newborn navels seems like a no brainer but research to the effectiveness has been lacking. Mainly just everyone does it and it is logical. Recently Cornell did a study comparing 7% iodine (the stuff that is hard to get because they use it to make methamphetamine), 2% chlorhexidine (Nolvason), and Naval Guard (a product we

### **Pink Eye:**

If you vaccinate for pinkeye, start thinking about getting it done now. Unfortunately, fly season will be here way too soon.

have used for some time). They all worked equally well. **Take Home:** Clean calving environment and dip navel with a good product and keep the calf out of the manure.

### **Metaphylactic treatment (preventive treatment)**

Recent research at Kansas State compared three drugs used as a prevention when calves were brought into a feed yard. The drugs were Draxxin, Micotil, and Zactran. All three of these drugs are from the same class of antibiotics, the macrolides, but the molecular structure is different therefore affecting how long the drug stays in the lungs and how it is absorbed by the bacteria we want to kill. In this study the average daily gain was higher and the number of sick calves lower with Draxxin, although death loss was the same across all three. Unfortunately, Draxxin is the most expensive.

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## Update on Sensitivity Testing

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During the decades of 1960 through 1990 there was a big push for sensitivity testing in a lab to select the correct drugs to use to treat an infection. This was a great idea, and in some instances it has some merit, particularly in resistant infections in human medicine. However, in veterinary food animal veterinary medicine the use of sensitivity testing has some serious limitations. These include:

1. The test takes time, and it is reasonably expensive, so should you wait in an acute herd outbreak?
2. There are very few options for drug class selection in food producing animals, and the selection keeps shrinking. In milk cows we can use the penicillin, ampicillin, and ceftiofur molecules that have very similar bacterial resistance patterns, or tetracycline or for a couple diseases sulfadimethoxine. So if the bacteria is sensitive to Nuflor it doesn't matter, we can't use it.
3. The majority of strains of species we culture have specific sensitivity patterns so we know ahead of time what the resistance pattern is. This is often true in mastitis.
4. Many times there are negative outcomes to drugs that sensitivities say should work because of the disease is too far advanced or we can't afford to treat long enough. This is very often the case with mastitis.
5. Nasty diseases like Salmonella only have a single drug that may work in a few cases, so we try that drug, but there are no other options.

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### Not that it affects us But:

The United States and Canada have eliminated a number of diseases and parasites that affect food animals in Mexico, Central, and South America. We have no Foot and Mouth Disease at this time, a disease that could cause all the beef, sheep, goats, and hogs in an entire state to be killed in order to stop its spread. And although the government is supposed to pay indemnity for livestock destroyed, I doubt that it would be timely nor at 100% value, nor bumped up for higher quality animals. When I was in college, a labeling error caused a fire retardant chemical to be introduced into cattle feed. The effected farmers were not allowed to sell milk or meat, nor kill their animals for a two year time frame. Some animals died from starvation, some farmers just shot their animals, and some tried to comply and used up all their money. In the end the farmers were never made whole and they all ended up out of business.

Screwworms have shown up in Florida, and Fever ticks are north of the quarantine line along the Mexican border. Fever Tick is a problem in white tailed deer, found in Southeast Texas.

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