# Cattle Lameness with Dr. Meredyth Jones ORIGINAL MIXDOWN

**Dana Zook:** [00:00:00] Welcome back to the Extension Experience Podcast. I'm Dana Zook. This week we are recording from the Oklahoma State College of Veterinary Medicine. Dr. Meredyth Jones is joining us to discuss her work. On lameness in beef cattle and I suppose dairy cattle too. Maybe you can correct me if I'm wrong.

**Dr. Meredyth Jones:** Yes We do see a few dairy cattle as you know, there aren't many to see

**Dana Zook:** right? There's not as many to see in this state Unfortunately,

**Dr. Meredyth Jones:** right.

**Dana Zook:** Dr. Jones is a veterinarian and associate professor at the college of vet med here on campus. Dr. Jones thanks so much for joining me.

**Dr. Meredyth Jones:** Yeah, thanks for coming to us and making it easy for us to record with you today

**Dana Zook:** It's really great.

So it's been a while since you've been on we've talked in the past a little bit, So do you mind telling us a little bit about your background and, and how you came to be with us here at OSU?

**Dr. Meredyth Jones:** Yeah, so I actually grew up with my dad as a large animal veterinarian, mixed animal veterinarian, so we saw everything.

From dogs to cats to cows and whatever walked in the door. So I grew up in that environment and I always said [00:01:00] I was going to be a food animal veterinarian. And I liked cattle the most and I always said that I liked the people who owned cattle the most and those were the people I wanted, the animal owners that I wanted to work with and for.

So I came to veterinary school here at OSU. Graduated way back in 2002, which is getting further and further away in the memory. And wrinkles are

really starting to show up and things now. I think there's supposed to be wisdom that comes with that, too.

**Dana Zook:** There is wisdom.

**Dr. Meredyth Jones:** There's supposed to be wisdom, yes.

Then I went back into private mixed animal practice in north central Kentucky with my dad. And then came back out here and did my school. Specialty training here at OSU where I just focused on food animals, taught at Kansas State and Texas A& M each for a little while. And then back in 2018 came back to OSU, which was always my goal was to make it back to Stillwater.

So here I am.

**Dana Zook:** Well, we are very lucky to have you here as a resource for producers I'm sure [00:02:00] veterinary students OSU extension. So, listeners, Dr. Jones has It's provided a little bit of in service training for some of our Extension educators. And she's graciously taken that time because she doesn't have an extension appointment.

So we do appreciate those that do that and a lot of people in Vet Med do do that for us. But one of those educational sessions was called, We Will Not Be Defeated. Laughter. Which is a great title that brings some humor to a very serious issue in the beef cattle industry, but just very insightful. And so I wanted to bring Dr. Jones on to talk a little bit about that. So, Dr. Jones, there's some , in my opinion, there's probably a different word for that, but some confusion about lameness in the industry. Can you tell us a little bit about what lameness is and what the illness entails if you call it an illness or, or something like that.

Right. Maybe a little bit about how, how it can be misinterpreted as well.

**Dr. Meredyth Jones:** Sure. I do think there [00:03:00] is a lot of confusion when it comes to lameness. I think a lot of people are sort of really comfortable with foot rot. Everybody kind of knows foot rot, this bacterial infection of the foot and most people are pretty comfortable with treating uncomplicated cases of foot rot at home.

We have a number of antibiotics that are labeled for foot rot and so everybody kind of, I think feels like we're all on the same page and has some understanding about foot rot. And so, , as you might imagine, lameness of any cause causes tremendous production losses.

Animals who are painful for any reason do not eat as well. Their body is not going to produce as well. If it's a bull, he's likely to lose weight. He's not going to travel to breed cows for sure. And especially if it's a back foot, he's not going to feel like mounting cows. You know, you can see where this goes.

A cow is not going to make enough milk to raise her calf like you want. So there's major money involved [00:04:00] in lameness. One of the things I think that I like to focus my training with folks on is, okay, let's make sure we're all treating foot rot appropriately, that we're identifying it on the farm, that we understand what it looks like and that we make appropriate selections of how to treat it.

And then my take off on that is. We need to know how to identify when it is not foot rot and unlikely to respond to antibiotics at home and then how do we make those decisions because we are losing production when we are treating something that's not likely to be treatable at home, those kinds of things, and it's an animal welfare concern.

We don't want animals walking around severely lame. That's just not how we want to treat animals.

**Dana Zook:** What have been the traditional treatments for lameness in the past?

The traditional treatment has always been a dose of LA 200. I think, you know, that's kind of the old [00:05:00] standby treatment for everything is, let's give it a shot of LA 200 and see what happens. And that's appropriate. Foot rot is on the label. Treatment of foot rot is on the label of LA 200 and all those generic cousins that it now has.

So, we know there's a lot of things that are basically LA 200 but not labeled that way. Mm hmm. And then there's kind of been the advent of the Draxxin's and the Nuflor's and those have all come along and I, I would say the vast majority of animals that come into our clinic who are lame have already been treated at home and it seems like Draxxin seems to be what everybody loves to give.

I think the low volume, those kinds of things about Draxxin make it attractive in that way. And again, both Nuflor and, Draxxin are labeled for foot rot. There are others that are labeled, but those kind of seem to be the good old boys. The LA 200, Draxxin, Nuflor, is what most animals have had when they come into us.

And the important thing that I want [00:06:00] people to know about that is, is I do think that it is fine at home to see a lame animal and to see a swollen foot and think, okay, it's probably foot rot. And to treat it at home. A true case of foot rot, though, should be substantially better two to three days after a dose of one of those appropriate antibiotics.

And that's one of the two keys that I like to emphasize about foot rot is it should be better in two to three days or, you know, well on its way. They are improving significantly. What we get, unfortunately, is We've been giving her Draxxin, , every few days for two or three weeks and it, and she's either getting worse or it's not getting better.

And those are no longer foot rot cases. That's when we need to know on that day three or four, your veterinarian needs to know this isn't responding [00:07:00] like I would expect a foot rot and now we need to get it diagnosed. We need to figure out what exactly it is and what.

And I, I guess I'm assuming that visually looking at the foot right after maybe that initial treatment.

Yes. I mean, if not the first thing that would be ideal, right? Right. But visually looking at the foot safely. Yes. And seeing what we have going on. So, okay, before we jump into some of these new treatments, what are you looking for when you look at, look at a foot? Yes. I think that's appropriate.

Absolutely.

And if we were doing a video podcast, that sure would be nice, wouldn't it? A future. But maybe there would be an opportunity for us to link to some photos or something like That might help here. So what Dana just said about looking at the foot safely, I, I want to park there for just a second, which is a lot of folks don't have a chute that makes looking at a foot easy.

The, the [00:08:00] lesion of foot rot is actually between the toes on the bottom side of the foot. Well, obviously that is a problem, right? Because now you've got to pick this foot up and that's just, it's not an easy thing to do. It can be done with ropes and a chute and there's ways to do it safely, but it's not the easiest thing to do.

But when looking at a foot. When I do these trainings live, I show pictures, and you guys can picture this in your mind because you've seen enough cow feet in your life, that if you sight down the front of a cow's foot, you know, you've got

two toes that come down, if it is foot rot, generally the swelling is all the way around that foot and pretty even all the way around the foot above the coronary band, like where the hoof meets the skin.

So, you've got this round foot that's swollen everywhere, and both sides should be pretty equal. You look at those two toes coming down, and they're sort of both swollen. That's typical of foot rot. The [00:09:00] number one thing that we see that causes swelling in the foot that's not foot rot, is a septic, meaning a deeply infected joint down in the hoof capsule.

When you sight down that foot And you draw a line right down the middle of it. One side is where all the swelling is and the other side's pretty normal. And that's because we usually only have one toe that gets infected with that joint infection. And so for me, that's what I would love everybody to do is look at that.

If the swelling is in the foot and you see that clearly, is it on one side or is it on both sides? And that's particularly important to do before you treat. because treating the infected joint is pretty expensive. We do it all the time in valuable cattle. You know, we can do surgeries and things like that to get that under control.

But the heartbreaker [00:10:00] is a guy comes to me, he's already treated with one of these long acting antibiotics, which means it has a long withdrawal on it. We have a severely lame animal, And I look at it and say, that's a septic joint. It's going to cost you several hundred dollars to try to get that infection under control.

But now they're stuck with the cow because the withdrawal is in her from the drugs they gave at home. So if you can at least look at that foot and say, this is one toe versus both toes that are swollen, that can help you make the decision. If they're both swollen, yeah, go ahead and treat at home. Like it's a foot rot.

If only one is swollen, I would prefer you not to treat that at home because then you still have options perhaps to salvage her. Whereas once you put something with a 45 day withholding on it or whatever, you're stuck with her now.

That is really good advice. So [00:11:00] listeners, if you can visualize those two things, which I think is pretty easy, but we will put some links to some photos .

So, given that this is a complicated thing, what different type treatments are you offering here at the clinic to treat various forms of lameness and, maybe dive into some of the research that you're trying to do some of that.

**Dr. Meredyth Jones:** So we do have opportunities , obviously we would prefer not to, have to quote people $1500 to fix a foot every time we'd like to have some other more economical options to offer producers and so one of the things we're working on from a research standpoint is there is a way to give antibiotics in the vein of the foot and have, you basically, I use the word marinate a lot, I feel like beef people.

I like that. I understand marinating. And so there are ways to inject the veins of the foot in a way that keeps the antibiotic just in the foot. So I refer to that as the foot is [00:12:00] marinating in antibiotics. And we let that foot sort of marinate for about 30 minutes at a time. And the idea is that rather than giving the shot in the neck like we're supposed to and the whole body gets the antibiotic, we can concentrate that antibiotic in the foot and get a higher concentration of that and perhaps have a better chance of getting these deep infections under control.

There are other surgical options that we offer. The most expensive of those is one designed to keep the infected toe on the animal. And that is we go in and drill out the joint. That animal is in the hospital several weeks. We do that on really expensive bulls that it's a back foot, for example, where cutting one of the toes off is not a great option for him because he's going to have a shortened life, breeding lifespan due to that.

And then the obvious third one that folks may have had done by their veterinarian or maybe have had done by us is a claw amputation. [00:13:00] And so that toe that has an infected joint, because cattle have the luxury of two toes we have the opportunity to amputate the toe that is infected. That is considered a salvage procedure because cows were obviously not designed to walk around just on one toe.

But if you bring me a cow that's six months pregnant. She's a commercial cow. She has an infected toe. I'm probably going to strongly suggest to you that we amputate the infected toe. , we know from research that that will keep her alive and sound comfortable long enough to have that calf and raise it.

And then when it comes time to sell weaned calves, she goes on the truck too at that time. We know that you can get. , that kind of time out of it. And so the claw amputation procedure is designed to get them to a production goal. So cow

needs to have her calf and raise it. [00:14:00] Maybe you've got a feeder calf that you just need him to grow and finish out his time before he's harvested.

Claw amputation is a economical procedure that can achieve those kinds of goals. If you have longer term goals. then we need to go to the more expensive and extensive surgeries like drilling that joint out and keeping them in the hospital, that kind of thing.

**Dana Zook:** And they are still mobile once you amputate that toe, but they're not going to travel 10 miles or anything .

So, so that's the difference. Yeah.

**Dr. Meredyth Jones:** People are generally blown away by how well claw amputation animals actually do. And my case that I make is they were so painful before from the joint being infected that it's like the pain of the surgery seems like not, they behave like that's almost nothing compared to the pain they were in before.

These animals actually do quite well. Now we do say if you [00:15:00] got a really rocky place, they've got to travel a long ways for, , water, that kind of stuff. You want to be able to kind of control how much of that they have to do. But these animals usually, once that co amputation is healed up, they take off.

They go back to gaining weight, they go back to making milk if that was their job, you know, all those kinds of things they recover very quickly from that procedure.

**Dana Zook:** So do you, are you guys looking into other sort of options? From a drug standpoint, because we are so limited.

**Dr. Meredyth Jones:** Yes, yeah, I think that goes back to I can expand a little bit more on that.

It's the procedure I talked about injecting in the foot. We call that regional IV injection. So a region meaning only one part of the body is getting the antibiotic. That's what we're looking at is. For a variety of reasons. Right now, we really only have one or maybe two drugs that we can use in that way.

One of those [00:16:00] is Nuflor, but those of you who have used Nuflor know that putting it into a tiny needle, going into a vein of a foot it's like maple syrup trying to go through there. Okay? And so while we have actually , Dr. John

Gillum, who is. Our field services clinician, one of my colleagues here, back 20 years ago when he and I were residents together, he did the research in Nuflor looking into that.

But it's difficult to get through the catheter. And so we're looking at other options. Are there things like Draxxin perhaps that we could put into the foot that way much less viscous drug, go through a smaller needle? has a similar activity against kind of what we call the foot bugs, the bacteria of the foot.

And so that's the kind of work we're doing here right now is can we expand what we offer for the antibiotics to try to get these infections under control by that route. [00:17:00]

**Dana Zook:** So do you believe that there is a genetic component to some sort of, of issues that cause lameness? Of course, we may not have mentioned everything.

Right. But so what are some of the kind of Things that are passed down from one animal to the next, will we see that will come, come across as lameness?

**Dr. Meredyth Jones:** Yeah, I think the one that just immediately shoots to mind, obviously, is corkscrew claw, which is this condition. Many of you have likely seen it because how popular black Angus cattle are, it seems to be, it's not a black Angus, an only black Angus problem, but it's It's pretty prevalent in them.

And that's where you see those outside two toes on the back legs that do this curlicue thing and they turn in. And unfortunately those animals, because of that abnormal claw, are likely to develop things like sole ulcers, abscesses in the foot and a variety of different cracks and conditions. And those infections can go deeper.

Or if they breach the hoof, [00:18:00] they can get into the deeper. structures and eventually get into the joint and those kinds of things. So yes, I would say corkscrew claw is, is probably the biggest genetic issue that we see in feet and it predisposes to all kinds of problems. Other things that maybe we don't have a lot of evidence for, but you know, just poor hoof quality.

You know, I think there's probably good reason to believe there are genetic lines of cattle that the the horn, what we call the horn of the hoof, the hard hoof wall is just of poor quality. I think that can certainly run in families. A lot that plays into that though is nutrition as well, specifically trace minerals.

And so I don't think we can totally, you know, hold a bull responsible for, you know hoof horn quality because there is a massive nutritional component to that as well. But whenever you do have that poor horn quality, that it's going to be predisposed to cracks. It's going to be predisposed to [00:19:00] a lot of things we talked about with the corkscrew claw that can cause infections that they develop severe lameness from that.

**Dana Zook:** I've heard Harry Healwort. Harry Healwort. Is that mostly dairy?

**Dr. Meredyth Jones:** Well, it has been, historically. Yes, historically. And I think it has been largely ignored by beef people because we thought this was, so Harry Healwort is an infection of the foot also caused by a different kind of antibiotic, or a different, a different type of bacteria Yeah.

called a spirochete. It's kind of this little spiral shaped bacteria and it is highly contagious. And that's why dairies have always had a problem with it is you buy one cow and she's got hairy heel wart bacteria in her foot. You know, you think about the confinement style of most dairies, that's just going to go through them like wildfire.

But we now are seeing it with pretty clearly increasing prevalence. [00:20:00] in beef cattle as well. I just spoke at the OCAN conference up in Coffeyville, which is the Kansas extension, Kansas state extension and Oklahoma state extension joint meeting. And AJ Tarpoff, who is a veterinarian up in Kansas with Extension up there, and he was in the audience, and I, somebody asked me about Hairy Heel wart and I said, yeah, I really feel like we're seeing more of it, and AJ's head was just, bouncing.

He agreed, yes. Yeah, absolutely, that he was seeing it as well and so, I know it's not just us here in Oklahoma, but I hear about it a lot from the Extension folks here in Oklahoma, and it causes severe, lameness. Those animals are very painful. It is a superficial infection, and yet, it's still excruciating.

And so this is a time where biosecurity is a big deal. You know, foot rot, they get that from the environment. That's not really a contagious thing in cattle, but hairy heelwort is. when you're sharing things at shows, or [00:21:00] you purchase a new animal, they can bring in hairy heelwort. They may not even have the lesion, but they've got the bacteria on their foot.

That's usually how it's brought in, is new animals and sharing of equipment.

**Dana Zook:** I've heard a little bit about that from someone I knew in the dairy and then we started talking about it as I've been in extension, so I wanted to bring that up too.

**Dr. Meredyth Jones:** Yeah.

**Dana Zook:** So, excellent information, Dr. Jones. You can find more information about the topics we discussed today in the Show Notes. We'll put some pictures. Dr. Jones, if you had one or two final closing comments , talking about lameness to producers, what, what would you say?

**Dr. Meredyth Jones:** I think the first thing that I would say is get them recognized early and take action early.

You are actively losing money every, maybe to be dramatic, every minute that that animal is lame. You know, they are we know that pain and certainly if they're severely lame, getting to feed and water, you know, that is, It's [00:22:00] really affecting your bottom line. And then the second thing that I would say is get your veterinarian in on the deal sooner rather than later on lameness because we see so many of these that we could have fixed relatively economically early on had we known about them and they just get to us too late.

So. Jump on lameness early. It's very painful and it's costing you money. And then second, get your local veterinarian involved as soon as you possibly can to get these more severe ones figured out so that we have a chance to make a difference on them.

**Dana Zook:** Absolutely. Thank you so much for joining me, Dr. Jones. Listeners, thank you for tuning in. Again, look at those show notes. If you're really interested, reach out to your county extension educator. For more information, we have access to Dr. Jones and can can kind of get her if she has, if you would like some input from her on any sort of lameness issue.

So listeners, thanks for [00:23:00] tuning in and have a wonderful week.