

Host

Dr. Sarah Probst Miller, DVM

Featured Speakers

Dyneah Classen, DVM

Aaron Lower, DVM



Dr. Sarah Probst Miller

Hello, and welcome to the latest addition of P's in a Pod. This is Dr. Sarah Probst Miller and I'm serving as your host for P's in a Pod where we focus on pigs, production, and profitability. P's in a Pod is sponsored by Pfizer Animal Health. Today we are speaking with Dr. Dyneah Classen and Dr. Aaron Lower about reducing navel infections. Dr. Classen, we wanted to talk to you about a case you worked with, with Professional Swine Management. Can you start by talking to us about your role with Professional Swine Management and what sort of system it is.

Dr. Dyneah Classen

Sure, Sarah. I'm Director of Health for Professional Swine Management, where we manage just under 80,000 sows as well as some related gilt finishing.

Dr. Sarah Probst Miller

Ok, great. And in Professional Swine Management, Dyneah, what is the relative size of the sow farms that you are working with?

Dr. Dyneah Classen

The sow farms range from 2,500 head to about 6,400 head, so, relatively large in size.

Dr. Sarah Probst Miller

Now, Dyneah, as you work with this system, with Professional Swine Management, what are you doing to monitor navel infection levels?

Dr. Dyneah Classen

Well, we don't have any specific monitoring in place. However, at the multiplication level we are hand picking pigs, looking them over for selection purposes, and there we did notice that we were seeing some differences in the navel appearance. And then also on the commercial farm level the same thing. We're picking pigs up as we wean them and if we see any problems there. We also noticed some related joint infections that was also calling attention to the problem and to some increased navel infections.

Dr. Sarah Probst Miller

What sort of incidence were you seeing in regards to navel infection? Was it specific to a group of farms

Dr. Dyneah Classen

Well, we seem to see it across the system when we had made a management change in the antibiotics we were using on Day 1 care.

Dr. Sarah Probst Miller

So, Dyneah, what change did you make right before you started to see these issues?

Dr. Dyneah Classen

Initially we had been using Excede™ on Day 1. However, due to economic concerns and costs we elected to move to Penicillin at processing. After that change, we began to follow the navel infections and the lameness due to joint infections.

Dr. Sarah Probst Miller

You think that it was related to the change to Penicillin at that time?

Dr. Dyneah Classen

Yes, we believe so.

Dr. Sarah Probst Miller

So, Dyneah, when you were monitoring for navel infections/joint infections, how were you scoring these pigs?

Dr. Dyneah Classen

Once we received the feedback from the sow farm managers that they were experiencing an increase in navel infections and joint infections, we did start actually going through and monitoring these through a counting system. We used a 0 through 5 score, 0 being no signs of swelling or hernias, 5 being an actual hernia present, and then 1 through 4 being various degrees of hernia scab, a red appearance, actually having pus, or just being hard.

Dr. Sarah Probst Miller

So, as you were interpreting this data, Dyneah, how did you deal with the different scores and what incidence level did you assign to the pigs coming out of the herds that you were monitoring?

Dr. Dyneah Classen

Well, we determined that a score of 0 where no signs of hernia or swelling was normal and as well as a score of 1 where there was no hernia and there was still a healing scab. Anything higher than that, a 2 through 5 were grouped together as being an infected navel cord.

Dr. Sarah Probst Miller

So, Dyneah, what incidence level did you come up with from this data after you interpreted it?

Dr. Dyneah Classen

Well, we had a varying response across the farms in our system. However, on average, 10% of the herd was affected with a score of 2 or higher.

Dr. Sarah Probst Miller

Ten percent seems like a lot. Were you surprised by that number?

Dr. Dyneah Classen

Yes, actually I was pretty surprised by that. We thought it would be some present, but not to that degree.

Dr. Sarah Probst Miller

And were you starting hear customer complaints, complaints from those folks receiving the pigs?

Dr. Dyneah Classen

Customer complaints were still relatively low at that time. A lot of these were, you know, just a hard umbilical cord or a little bit of redness to it. We weren't really getting any complaints of full on hernias at that time, which is usually where the customers become concerned. However, the farm staff were seeing those and at the multiplication level it became difficult picking up those pigs as part of our grading would not allow those to be sold.

Dr. Sarah Probst Miller

So, Dyneah, diagnostically did you have good history as to, you know, what could be the causative agent of this incidence level of navel infection.

Dr. Dyneah Classen

Yes, Sarah, we have been concerned about what causes umbilical infections and have actually done a research study looking at what is found at the umbilical junction. The umbilical stump was scrubbed with Betadine for 30 seconds prior to taking an aspirate using a small TB needle. We consider the navel junction to be the area where the navel cord meets the umbilical stump, so right at that skin level. Those aspirates were then cultured and what we found is that 28% of the pigs that were 36 to 48 hours of age had an ascending infection from an array of bacteria. Those pathogens included *Staph hyicus*, *Strep suis*, *E. coli*, *Staph aureus*, *Enterococcus* species, as well as a protease.

Dr. Sarah Probst Miller

Did reviewing these diagnostics, weigh on your decision to move back away from the Penicillin at processing?

Dr. Dyneah Classen

Well, looking at the bacteria that were involved, you know, we know that several of them may be sensitive to Excede™ and several of them may not be. Initially we were hesitant to switch back, but elected to try it on a few farms to see what the overall impression would be.

Dr. Sarah Probst Miller

So, Dyneah, after you implemented Excede™ on these farms, what were some of the results that you saw?

Dr. Dyneah Classen

Once we realized that there was a problem, we did go back to Excede on Day 1 and we saw that on three of the farms there was a statistical decrease in the number of navel infections. We went on one farm from 22% without Excede™ to 0% infected. Another farm went from 15% without Excede™ to with Excede™ 6% infection, and a third was relatively low. They only had 4% infected without Excede™, but it had gone all the way down to 0.

Dr. Sarah Probst Miller

So, it sounds like those are results that you would be pretty pleased with, was that the general assessment of the change?

Dr. Dyneah Classen

After reviewing our data and finding that pigs without Excede™ had significantly higher navel infections compared to pigs that had been given Excede™ on Day 1, we decided to move away from Penicillin at processing and Excede™ only at Day 1.

Dr. Sarah Probst Miller

And this is something that you implemented then throughout the system?

Dr. Dyneah Classen

Yes, we have this in place at all of our farms currently.

Dr. Sarah Probst Miller

So, Dyneah, when you look at how you implemented this on-farm, did you have farms focusing on other tasks that might improve sanitation at the same time that you implemented Excede™ or was it solely just with implementation of Excede™ that you came to this conclusion?

Dr. Dyneah Classen

Well, certainly there may be confounding factors such as sanitation. We know that, that is important to have pigs farrowing in a clean environment and that the farm's ability to wash, disinfect, and dry before having to farrow is certainly important, but we did see across the board an improvement regardless of sanitation practices when Excede™ was used at Day 1 of age.

Dr. Sarah Probst Miller

Well thanks so much, Dyneah, for sharing this case with us. Now, Dr. Lower, I know that you recently addressed a similar case on an independent producer that we've both done work on in the past. Can you give us a little bit of history of this producer's facilities that he deals with?

Dr. Aaron Lower

Yeah, this producer is a 1,500 head farrow to wean operation in which the producer also does finish these pigs. The facility is quite a bit older. I still don't know if I know my way effectively around the farm yet. It's a hodgepodge of multiple barns that have been turned into farrowing houses and nurseries that have been converted.

Dr. Sarah Probst Miller

I know what you mean, I think I was lost in there too one afternoon, but I finally made my way back out.

Dr. Aaron Lower

There is a lot of equipment and ventilation differences throughout the farm, but we try to manage through that and produce a good pig.

Dr. Sarah Probst Miller

Now is this producer also raising its own pigs or is he selling the wean pigs?

Dr. Aaron Lower

He raises his own pigs farrow to finish operation, but this site would be a farrow to wean site. So, typically, I visit the producer once a quarter and spend the day in the operation going through and looking at pig health and quality and reviewing production records and management practices.

Dr. Sarah Probst Miller

As you visit these producers, Aaron, do you consistently monitor navel infections or joint infections in the wean pig? Is this something that you just routinely do or did the client perceive this as a problem?

Dr. Aaron Lower

The client didn't perceive it as a problem. And no, it is probably something I should be more consistent about. However, when walking through his farrowing house rooms, I do like to look at the fallback pigs and try and make a decision on why that pig's fallen back so that we can identify whether it is a health issue or management issue.

Dr. Sarah Probst Miller

What were you doing that you found navel infections as a potential problem?

Dr. Aaron Lower

On this farm as I was walking through farrowing, overall pig health and quality was quite good except for there were quite a few fallback pigs in litters that were 14 to 21 days of age. And so I was picking them up and as I kept picking up those fallback pigs I kept looking at navels and joints and noticing that there were quite a few, almost all the fallback pigs that I found had a swollen navel or swollen joint. This then prompted us to look at it a bit further and go and pick up 100 pigs in the oldest room and count how many swollen navels there were.

Dr. Sarah Probst Miller

And what did you see?

Dr. Aaron

So, we got the farm manager and the head of farrowing and went through and counted these pigs and we came up with 20% of the pigs that had swollen navels and swollen joints, which was quite an eye opener to the farm and to me because this was way above target.

Dr. Sarah Probst Miller

What did you attribute to causing these navel infections/joint infections?

Dr. Aaron Lower

You know when I look at navel infections and joints I think just the two big things is sanitation first and foremost, and then antibiotic coverage for these pigs. So we addressed two things with this farm, the sanitation and then currently the farm wasn't using any antibiotics at Day 1 or at processing.

Dr. Sarah Probst Miller

Did you implement then some antibiotics and what affect did it have?

Dr. Aaron Lower

The first thing that we wanted to convince the crew of sanitation was important and we needed to focus in on that. So, we went back to the basics washing hot boxes with soapy water, washing rooms letting them dry, and then I think one of the important things is that somebody on the farm is responsible for inspecting those and approving things and holding everyone accountable. One of the other changes that we would have made with regards to sanitation is that the farm was using bleach because it was during the summer to help with coccidia control. We did switch the farm from bleach to Tek-Trol[®] in an effort to reduce the bacteria load in the crate.

Dr. Sarah Probst Miller

What antibiotic coverage then did you offer at, was it Day 1 or processing?

Dr. Aaron Lower

Yes, we tried to get in there as soon as we could so on Day 0 or Day 1 we begin using Excede™ in order to provide antibiotic coverage for that pig at birth as well on Day 5 when this farm would process pigs. Excede™ was the right decision in order to give us good antibiotic coverage in those two time periods. Then, I put it on my calendar to call back to the farm in a month and had the farm go through and pick up another 100 pigs one month after we implemented the sanitation and antibiotic changes. And they reported back to me that they had 4 pigs out of 100. So we reduced that percentage of pigs affected from 20% to 4% with our combination of sanitation and antibiotic coverage.

Dr. Sarah Probst Miller

Now, Aaron, do you have intentions of relating this back to even umbilical hernias or belly busts at the finisher level, is that a perceived problem at this farm?

Dr. Aaron Lower

Yea, that hasn't been high on our minds in past visits, but I'm due up there for another visit here soon and it will definitely be something that I'll be looking at over whether that increase in navel infections resulted in an increase in belly ruptures because those pigs ought to be near the end of finishing now.

Dr. Sarah Probst Miller

Ok, great. And, you know, Dr. Lower, like Dr. Classen you implemented several things at once. Do you have a sense as to whether the increased sanitation alone would have affected change or what is your gut feel on that?

Dr. Aaron Lower

I think that swollen navels and joints are, they're definitely a multifactorial issue and so it is important to prioritize and throw a little bit of the kitchen sink at it not expecting one thing to be the magic bullet, but that it's important that we do select the right antibiotic for the bugs that we are trying to treat and also reinforce and make sanitation a priority in the farrowing rooms.

Dr. Sarah Probst Miller

Alright, well thank you, Dr. Lower and Dr. Classen. I appreciate you being willing to share information on your navel infection case. I know it's something as a vet that, you know, we've fought off and on when we see this occurring and I think that these are two really good case studies that show the value of improving sanitation, choosing an antibiotic that best covers the bacteria that are affecting the pigs. And you both made significant improvements for your client and I know your ultimate goal is to best serve your customers. So, thanks again for sharing this information. And for our listener as you drive down the road we hope you drive safe and have a great day.