## Spring Turnout and Branding Time Considerations

## Season 1, Episode 58

[Intro music]

**Kiernan Brandt:**

Welcome to Cattle HQ, a podcast from industry experts and progressive producers discussing cutting edge info about the cow calf sector to keep cattlemen and women in the know and positively affect their bottom line.

**Robin Salverson:**

Welcome to Cattle HQ, brought to you by South Dakota State University Extension. I am Robin Salverson, your host for this episode of Cattle HQ. Joining me is Addie Womack and Dr. Russ Daly to discuss the importance of following beef quality insurance guidelines as we move into the branding season. I'm excited to have both of my coworkers joining me on this episode. Both of you have been on past Cattle HQ episodes, but for our new listeners, could you share a little bit about yourselves? So, Addie, we'll start with you.

**Addie Womack:**

Hey. So, I am the Livestock Production and Stewardship Field Specialist here at SDSU Extension, and I am the State Coordinator for the Beef Quality Assurance Program.

**Robin Salverson:**

Thank you for joining us today, Addie. We really appreciate it.

**Addie Womack:**

Thank you.

**Robin Salverson:**

Dr. Daly?

**Dr. Russ Daly:**

Yes. I'm Dr. Russ Daly. I serve as the Extension Veterinarian at South Dakota State University, so I'm based out of the Veterinary and Biomedical Sciences Department at SDSU. Been here for a number of years, but before that I was in mixed animal practice in a small town in South Dakota. So, glad to be here.

**Robin Salverson:**

Thank you both. Both of you have a wealth of knowledge that our listeners will learn from here today. So, Addie as you said, you are the South Dakota Beef Quality Assurance Coordinator. So, could you share a bit about the program and why it's important?

**Addie Womack:**

Yes. So, the Beef Quality Assurance Program was actually initiated by producers. They kind of recognized like, “Hey, we need a program that will lay out some standards that we can go by and just put out to the public how we take care of our animals.” So, they got together, and they made this voluntary program, and it's based on the best practices for cattle welfare and that is what it educates producers on is these best management practices based on research and science.

**Robin Salverson:**

Awesome. I know there's been great strides. They do National Beef Quality Audits approximately every five years looking at some of the issues that we've seen in the cattle industry, and we've made great strides, haven't we? Because people are following the BQA standards or guidelines.

**Addie Womack:**

Yes, yes. If you go back and look at from the original quality audit to the most recent, you can tell that we have significantly improved the product or the beef that we produce. So, now we're looking a little bit more at the consumer side of things and consumers want to know that the animals are well taken care of. They kind of are more interested in where the animals came from and how they're raised. So, that's what we really focus on now in the BQA program.

**Robin Salverson:**

Excellent. So, when I first started working with the BQA program in the early 2000s and even prior to that, giving injections in the proper location was a big deal and it still is today, even though you said consumers. We're focusing on consumers now and what they want in a product that we're producing, but it still needs to be in the forefront to make sure people still are getting those vaccinations in the correct location. That's what we're going to kind of be talking quite a bit about today, a little bit. Part of our podcast, I should say, today is talking about and understanding vaccinations and where they should be given. That really rolls into our conversation today about calving is going on right now, and calving really is my favorite time of the year. Seeing all those little baby calves running around out in the pastures really makes my heart happy but it also means branding season is right around the corner too which truly is one of my favorite times of the year because I get to go out and hang out with friends and family and get to be around animals, but it's also a time that we are setting our calves up for success. So, Dr. Daly, could you share the importance of those calfhood vaccinations?

**Dr. Russ Daly:**

So, you’re exactly right. We're setting them up for success, especially in that time frame while they're out grazing, the summer grazing season. We've got things that those calves are going to be exposed to and can be potentially problems for them. So, vaccinating, trying to stimulate their immune system against those diseases is really important. In some cases, we can use this branding time shot or this turnout time shot to get them primed for what we're going to ask their immune system to come the fall. So, for those two reasons, it can be really important to consider those vaccinations that we're giving at branding time, in addition to all the other things we're doing to them at that time.

**Robin Salverson:**

So, is there an age that those animals should be, those calves should be, before they should be considered to be given a vaccination?

**Dr. Russ Daly:**

Yes. That's a question that we've really learned a lot more, I feel like, over the past few years. The traditional viewpoint was that these calves are so young that they can't respond to vaccines because they have still colostrum antibodies. If that calf got up and nursed colostrum, that's his or her source of antibodies for protection against disease right away in the beginning of life. So, the thought was, well, we vaccinate those calves during that time and that vaccine is going to be, I don't know, for lack of a better term, swallowed up or inactivated by the maternal antibodies. Well, what we know now is that some vaccines can still work in very young calves. So, when you ask the question about how young or how old they have to be, it does depend on the actual disease. So, for example, we've got some vaccines that are actually labeled and approved for very young calves, calves that are less than a week of age, and these would be the examples here would be the intranasal vaccines that we give against IBR virus and other viral pathogens. So, intranasal vaccines, we know that in younger calves they can work because we've got labels that say so. The other set of diseases that we're understanding vaccines to work fairly well in really young calves are the clostridial vaccines. So, think about your 7-way vaccines, your clostridium perfringens is the one we're talking about, clostridium perfringens C and D, the blackleg that we're giving to these calves. Those vaccines, a big component of them is actually inactivated bacterial toxins. So, the disease is caused not just by the bacteria but the toxins that those bacteria produce. So, those vaccines are unique enough and different enough from what the calf is normally experiencing in its own body that we get some pretty good responses to those vaccines. Otherwise, we do get some responses to like your regular 5-way viral pneumonia combinations. We can, but it's still what we're finding in a really young calf, it's still hard to get an active immune response to those vaccines in very young calves, and by very young calves, I'm talking about less than a month of age. So, what I'm talking about again, though, is those 5-way viral vaccines, modified live vaccines that we oftentimes will give at branding time too. So, very long answer to your short question, Robin, is that it really depends on the vaccines. Some of them we can expect to work okay. Some of them we need to have that calf just be a little older for that immune system apparatus to really respond to that vaccine.

**Robin Salverson:**

Well, I appreciate that answer Dr. Daly because that is a question out in our communities is how soon we can give those vaccinations and like you said, it's very dependent upon the disease and what you're dealing with. So, we want to make sure that when we give that vaccine that it has the efficacy that we expect of it and that, again, read the label and visit with your veterinarian to know.

**Dr. Russ Daly:**

Right. I've been around enough brandings and turnouts that I know too that what age we are going to vaccinate the calf. We're going to vaccinate the calf whatever age comes up, but I think it's useful for us to understand that whereas there's probably very few instances where we're hurting the calves by vaccinating too early, there are instances where maybe the vaccine's not going to work as well. So, when we do have those outbreaks of pneumonia or blackleg or other things out on pasture, we can go back sometimes to the fact that those calves were vaccinated pretty early and for that reason, maybe the vaccine didn't do what we really wanted it to do. So, not that we're going to maybe change our behavior too much, but at least I think we need to recognize the limitations.

**Robin Salverson:**

Absolutely. So, some of those calves that may have been born two or three days prior to a branding or spring turnout, some of those shots will work. Some may not have the efficacy that you want.

**Dr. Russ Daly:**

Exactly.

**Robin Salverson:**

Awesome. So, as I mentioned before, branding season is really a time when family and neighbors come together to help each other out, but it's also important that everyone actually follows those BQA guidelines. So, this includes giving those injections in the neck that we talked about earlier in this podcast. If anybody's ever been at a branding, it's really tempting to give that vaccination in the shoulder or in that armpit of the front leg because typically that neck is not very accessible because somebody's typically kneeling on it or sitting on it but still, again, it's really important to give that injection in the neck regardless of if it's accessible or not. So, Addie, why is it important to give those injections in the neck?

**Addie Womack:**

Yes. So, no matter how closely you follow all the protocols and guidelines when giving injections, there's always a chance that you can have an adverse reaction when you're, one, injecting the animal and two, then putting in an animal health product into the animal. So, by injecting them in the neck instead of the hip area or anywhere else, you are avoiding a more costly cut of meat. So, if there is by chance an injection site lesion or something like that, that may occur in the animal, the neck is an area that is going to cause less of an economic loss if there is that, that they have to cut out of the animal later on.

**Robin Salverson:**

I know I was – go ahead, Addie. I apologize. I don't want to cut you off. Keep going.

**Addie Womack:**

No, that's okay. I was just going to say because if I understand right, when that animal gets an injection site lesion it kind of grows with the animal, its skin. So, it's only a problem if that occurred at branding or when the animal is very young. That problem is really only going to get worse. So, if we can avoid it early on.

**Robin Salverson:**

So, I'd seen some pictures, and I believe you probably have too, Addie, in a study that showed calfhood vaccination blemishes can be seen all the way out to slaughter.

**Addie Womack:**

Yes. I was thinking that. I think that's in our BQA PowerPoint, those photos.

**Robin Salverson:**

Yes. So, to me, a lot of people have like, “Oh. They're only two months to three months old. No big deal,” but it is a big deal because we can see it all the way up to slaughter a year plus later.

**Addie Womack:**

Yes.

**Robin Salverson:**

So, Dr. Daly, does the location of the vaccination affect the efficacy of the vaccine or of the vaccination?

**Dr. Russ Daly:**

Well, the short answer is no. Whether the main thing for vaccines is you follow the label as far as it going, if it's an intramuscular shot or a subcutaneous shot. So, as far as the vaccine goes, it really doesn't make too much difference. It still has to be taken up by cells in the bloodstream and then traffic to one of the lymph nodes and that's where the real immune system response takes place, but the other part of that question, too, is every one of the vaccines - well, many of the vaccine labels now do say that it should be given in the neck and when you look at the work that the vaccine companies perform to get their vaccine on the market, they're vaccinating those animals as per BQA requirements. So, the vaccine company vaccinated those calves in the neck and then they were able to show that there was a certain response. So, the question is, well, what happens if you don't do that? What happens if you vaccinate, like you said, behind the shoulder or in the armpit or somewhere else on the animal? The answer is we don't really know because that's not how the company did the research. So, we can assume that it's probably going to work similarly if it's going in the muscle. It doesn't really matter which muscle or under the skin. It still going to get to the lymph nodes that need to process it. So, really, we shouldn't be worried that if I vaccinate in the neck, that it's going to work less better because that's just not the case.

**Robin Salverson:**

Because it really comes back to what Addie shared on what they know based on research and through the BQA program and those audits is giving it in the neck is the location that is best in regard to not seeing and also an economic or issues with the muscle itself or the meat that consumers are eating.

**Dr. Russ Daly:**

I'd also say Robin too, that if we - sometimes you talk about in the armpit because it's easy to lift that calf's leg up. There's a lot of pretty big nerves that run through that part of the body and if we have an infection or an abscess there, that's going to affect that calf's ability to get up and walk around a big pasture and follow his mom. So, there can be some adverse reactions more immediate to the calf's health that can happen when we vaccinate in some of these other places.

**Robin Salverson:**

I find the lymph node system to be very interesting or the lymph system. I've had some lymph nodes removed myself and the doctor described it as an interstate. It's basically an interstate highway. It's how things move in your body and to me, I just find that really fascinating. I didn't know much about the lymphatic system prior to me having to deal with it. I'm like, “Wow, that's a pretty impressive system in our body,” and the same thing holds true for a calf.

**Dr. Russ Daly:**

Yes. It’s a very neglected organ system within our bodies and calves’ bodies. I'm not sure I even knew there were such things until I went to vet school. [Laughter]

**Robin Salverson:**

I didn’t either. [Laughter]

**Dr. Russ Daly:**

It’s really important though for the immune system.

**Robin Salverson:**

Absolutely. So, something I see when I go out to a branding or in the branding pin or individuals mixing up several bottles of the modified live vaccines and then putting them in their cooler. So, Dr. Daly, how much modified live vaccine should be really mixed up at one time?

**Dr. Russ Daly:**

Well, the answer to that is how quickly can you use it? That's the answer to that. So, I'll back up and just say that really once we mix up a modified live vaccine and so I think our listeners get what that is. It's the vaccine that comes in a box and you got two bottles, and you have to put the liquid in with a little freeze-dried cake and that activates the vaccine. So, once that happens, the clock is ticking. So, as time goes on, as UV light hits that vaccine, as high temperatures hit that vaccine, that live virus is going to be inactivated and it's not a situation where we can just say, “Oh, well, it's still got germs in it. There's just a killed vaccine now.” Well, that's not the way it works because it killed vaccines have to have a lot more of the antigen, a lot more of the germ in it to make that immune system respond to it. So, if we inadvertently kill the germs in a modified live vaccine, there's not enough of them to really make an immune response. So, it's really important that we keep them alive. So, the time portion of that - when I've helped out with vaccine research projects like a company is doing that research to prove that your vaccine works, they'll make me give that vaccine within 30 minutes of when that modified live vaccine is mixed-up. Now, practically, you probably can - you don't have to worry, go quite so strict. I like to tell people within an hour for sure and that means you're still keeping that mixed-up vaccine cool in a cooler or prevent it from freezing if you happen to be using it when it's really cold out, but we need to keep those things in mind. So, the temptation sometimes is we really want to be efficient. So, yes, we're going to go mix up our vaccine all of it ahead of time. So, we don't have to stop and mix up as we go, but you really want to mix things up as you go. I had a partner in practice many years ago that was going to be really efficient about doing that before a shoot job and he mixed-up everything ahead of time, and these were like a couple hundred doses of modified live. He pulls up to the farm with his cooler and his shoot and doesn't see anybody around, doesn't see any cattle around and he comes to find out that the cattle got out of their holding pen, and they weren't going to be able to vaccinate cattle that day. So, that whole batch of mixed-up vaccine just went to waste. So, I really want to encourage people to use - if you have to buy smaller bottles, 5 or 10 dose bottles but just whatever you can think back, whatever you can use up within an hour, that's the most I'd ever mixed-up at one time.

**Robin Salverson:**

I think, Dr. Daly, your story about things happen and we can't - whether cattle got out or someone got hurt and then you have to stall out for a little bit or there's different scenarios that can happen that stop the activity for the day working calves, and so that also brings up a really good point of - Addie, once at least with the modified live vaccines, when they're done processing calves for the day, can they go put that modified live vaccine in the refrigerator and use it the next day? A lot of people want to do that.

**Addie Womack:**

Yes. You really want to because you bought it and you want to be able to use it, but no, you really can't store them once they're mixed up.

**Robin Salverson:**

It goes back to what Dr. Daly said. Basically, what you can use within an hour is what you should have mixed up and that's it. So, at the end of the day, that's why it's really good, as Dr. Daly said too, to buy smaller dose bottles as you get toward the end of the branding because everybody goes, “I think there's still 50 head back there. So, you can mix up a 50 head dose,” and then all of a sudden, you're like, “There's only 30 calves back there.” [Laughter] So, then you've just wasted a 20. You just wasted 20 doses. So, I think that's really important. So, Addie, can heat affect those vaccines too and sunlight and those kinds of things? If it's yes, how can they manage that?

**Addie Womack:**

Yes. Heat can affect the efficiency of our vaccines. So, they actually make some really fancy coolers that are color coded and have slots for your syringes and all of that good stuff, but they're a little on the pricier end. So, you can make your own and use those Styrofoam coolers and cut a hole for your syringe and keep those vaccines at the right temperature or just a regular cooler, but any bottle is going to tell you the ideal temperature range, but I want to say it's 35 to 45 degrees Fahrenheit. For most of them, right?

**Robin Salverson:**

Yes. I believe that’s correct.

**Addie Womack:**

Okay. [Laughter]

**Dr. Russ Daly:**

Good old refrigerator temperatures.

**Addie Womack:**

Yes. Another thing we always highlight in our BQA trainings is if it's in that range, the temperature is outside, you probably still don't want to store them on the dash or just lose in the vehicle because you don't know with the sun coming in the windows what the actual temperature is in your vehicle. So, go ahead and put them in the cooler.

**Robin Salverson:**

Well, and we just were talking about modified live vaccines, but Addie, this is also for the killed vaccines are already the solutions that are already premixed and ready to go. That holds true for both of those types of vaccines, right?

**Addie Womack:**

Yes.  I always think you paid for the vaccine, and you've done the work to get the animals up and ready and move them through the shoot and actually administering the product is kind of the last step. So, you want to make sure that you've treated that product carefully so that you don’t waste all your time and money up until that point.

**Robin Salverson:**

That's a really good point, Addie. Thank you for bringing that up. So, when I've been at brandings once in a while, the actual cooler for the vaccines is sitting really near the branding pot. We back up a pickup, we put the tailgate down, we put everything on the tailgate or a side by side, but it's usually by a branding pot. So, I guess with everything that Dr. Daly and Addie just shared is we really need to move that cooler away from that heat. I mean, again, it's kind of our gathering place, right? It's where we gather, but in reality, kind of moving that cooler away from the heat of that branding pot, I think it's just so easy to put things right there.

**Dr. Russ Daly:**

That's a really good point, yes. I haven't thought about that honestly before, but that's a pretty intense heat source and that can really decrease the life of some of those vaccines.

**Robin Salverson:**

Well, and also there's times where I've opened a cooler and there's no ice in there. They have the cooler, but no ice packs and so again, cooler, great. That's one step. Putting an ice pack in there is also a must have step in there to make sure that those vaccines, again, like Addie shared, we go through that whole process but if the vaccine doesn't have the efficacy, we've just shot basically water into that animal if we don't do diligence on the care of those vaccines. So, I've been known to take my own box of needles to branding because I show up at some of them and they only have just a few needles to be able to vaccinate, 200 to 300 calves. So, with that being said, Addie, how often should individuals be changing their needles?

**Addie Womack:**

Yes. So, ideally you would change your needle between every animal. By doing that, you're pretty much eliminating, transferring any bloodborne illnesses and you're really reducing the possible contamination between animals, but that's not always feasible. So, a good guideline to go by is every 10 or 10 to 15 animals. If you're using a multi-dose syringe, another good way to go about that is anytime you are going back into that bottle to get a new needle so that you're not putting any contaminants back into the bottle. If you feel that the needle is dull, go ahead and change it and the more the more comfortable you get with giving vaccines, you'll be able to kind of tell when that needle really needs to be changed. If the tip of the needle is blurred or if you drop it or get anything on the needle, change it especially before you go back into the bottle, but really before you go into the animal with that. You don't want to get any contaminants in the animal.

**Dr. Russ Daly:**

Addie, I really like that statement about - hey, we should be changing them between every animal, right. I mean, that's what they do with us when we go in and get vaccinations. [Laughter]

**Addie Womack:**

Right. [Laughter]

**Dr. Russ Daly:**

So, where do we come up with this that we have - how many calves can we get done with one needle, and I know it's a pain to change between every animal but anaplasmosis, bovine leukosis, I've worked with some herds where that is part of the disease prevention strategy and so, some of our listeners might go out to somebody's farm and that's something they want to do. So, you will be changing needles in between animals. So, I like that way of thinking. I know that it's maybe not what people want to hear.

**Addie Womack:**

Right.  Another thing I'll add, if your needle is bent, resist the urge to bend it back. [Laughter]

**Robin Salverson:**

That is so true. [Laughter]

**Addie Womack:**

We all probably think it like, “Oh,” and then but no. Just go ahead and change that needle because once it's bent, it's probably going to bend or break again.

**Robin Salverson**:

Don’t get your handy dandy players out and bend it back just take it off.

**Addie Womack:**

Right.

**Robin Salverson:**

Get your handy dandy players out to take off the needle.

**Addie Womack:**

Yes.

**Robin Salverson:**

So, that you can put a new one on. I'm not going to say I haven't been guilty of saying, “Oh, I only have just a couple more animals left,” and you just want to get through it and be done, but again, like you said, there's a good chance it will break off and please correct me if I'm wrong, Addie, but if there is a broken off needle in an animal, you cannot sell it BQA, right?

**Addie Womack:**

Yes. You cannot sell it to the big packer, knowing that it has a needle in it.

**Robin Salverson:**

So, talking about repeat syringes and stuff like that, some other syringes out on the market are vaccine guns that I call a continuous gun. Basically, there's a continuous flow of vaccine from the bottle to the gun. So, whether that's through a tube or the bottle sits on top of that vaccine gun. So, I think they're really handy because you don't have to stop and fill those guns again. I'm like I get in that groove, and I keep moving and I'm just “This is awesome. I'm efficient with my time. I don't have to stop at the cooler and get more vaccine out,” but I also have found myself to be really guilty of not changing the needle because you get in that groove and in that flow, and as Addie shared, if you could change in between every animal, but realistically, most people won't be doing that. So, changing at least between that 10 to 15 animals, the needle, but I think, again, I get in that flow, and I get in that groove, and I forget to change, and so I believe that is, again, those guns are really have a lot of good things about them, but I feel that is one thing, as a user, you need to pay attention to, right, Addie is making sure those needles are changed.

**Addie Womack:**

Yes.

**Robin Salverson:**

Also, I believe that you mentioned, Addie, and I believe Dr. Daly did too, that vaccine bottle should not just be hanging out in those hot temperatures. A lot of us might be out processing calve in June when the temperatures could be pretty warm well above what you just shared, Addie, vaccines should be stored at and so I feel that having those vaccine bottles out in the hot air temperature longer is not good either and if I'm wrong, you guys can disagree with me, but I think that's another potential issue with those types of vaccine guns, especially at spring turnout at vaccinations or branding times. Do you guys agree with that?

**Dr. Russ Daly:**

Yes. Depending on how hot it is out especially that can be an issue, and the other thing too is exposure to UV light. A lot of the bottles will be kind of cloudier so it helps with that but if you can - I've seen little insulator things you can put around those bottles and even the tube that goes from the bottle to the vaccine if that's hanging out there in the sunlight and the heat, that could be a thing too. So, little things maybe kind of more of an inconvenience to find that stuff and set it all up, but if you're going to go through the trouble of doing all this, I think it's one of those details, depending again on the weather situation would be useful.

**Robin Salverson:**

I appreciate that, Dr. Daly, in regard to how you can maybe manage some of those potential issues, like you said, having those little insulators or something to cover those tubes if you are going to use that type of vaccination gun and you never know, we shared some stories on you never know how long it's going to take to get those calves through the system. So, Addie, just one last question in regard to needles. So, on these baby calves, young calves, thinking about the needle size, what should people be using for needle size?

**Addie Womack:**

Yes. So, for the younger animals weighing less than 400 pounds, typically we want to pick a shorter needle, so kind of a half inch. If they're real thick-heighted animals, you may need to go up to a three-quarter inch length needle, and that's for sub-Q injections. If you're going into the muscle, you may need a little bit of a longer needle, three-quarters of an inch to make sure that you're getting where it needs to be. Then an 18 gauge works good for calves less than 400 pounds. You may need to go to a 16 gauge for calves or cows that weigh over 400 pounds. I had to make a little note on that so that I knew I was giving you the correct information. So, there is a little chart that you can get on the BQA website that lays this out for you, and you can refer to it that tells you based on the size of the animal, what size needle you may need to use, but also taking into account how thick that liquid is that you're using.

**Robin Salverson:**

So, you mentioned with basically calves less than 400 pounds using an 18-gauge needle, so that's the diameter of the needle, right?

**Addie Womack:**

Yes.

**Robin Salverson:**

So, in general, we should be using 18 gauge. Why do we want to use an 18 gauge versus a 16 gauge on these young calves? Let's just be thinking about the vaccinations that we're giving them are not very thick or solutions that we're giving them. So, they do flow through an 18 gauge easily enough, but why would we want to do an 18 gauge versus a 16 gauge on these young calves? Dr. Daly?

**Dr. Russ Daly:**

I think it just comes basically down to your inducing a little bit more trauma with a needle and so more of a chance of a blemish, a scar or something like that. So, yes, the smallest gauge needle you can get by with is probably always the better choice. So, in that regard, an 18 gauge would be better than a 16 and as you mentioned, for most vaccines, that's good.

**Robin Salverson:**

So, Dr. Daly, if someone accidentally filled the syringe with the wrong vaccine, could this cause a problem?

**Dr. Russ Daly:**

Yes. So, what you're talking about is you may have a modified live vaccine and the killed vaccine you're using at the same time, and you do this long enough during the day and you're going to get to the point where both of them run out at the same time. So, it's like, “Whoa, man, which one did I do? Which one was which?” and it is important because if there's a syringe you've been using for your killed vaccine the whole time and you suck up the modified live into that same syringe, there's enough of that adjuvant and some of the other preservatives and chemicals from the killed vaccine that it could inactivate your modified live vaccine. So, it's always a good idea to put a little colored tape or maybe just indicate which syringe you're using for which vaccine, and that'll head off a lot of headaches.

**Robin Salverson:**

Absolutely. I've seen that more and more. Some of those multidose syringes have now colored coated knobs at the end to where you pull back on the plunger, which is really useful or putting some tape on them so that we can identify between the modified live and the killed. So, Addie, how far apart should vaccinations be given?

**Addie Womack:**

So, about four inches apart is a pretty good rule of thumb or kind of about the size of your hand space between those injections.

**Robin Salverson:**

So, why is it important to give that space, that four inches between those vaccinations?

**Addie Womack:**

We talked about the consistency of the vaccines that we're giving, and they may be pretty thin. So, if you're giving a pretty good size injection in one spot, it could drip a little bit within the animal. So, spacing those injections out, you're making sure that - reducing the risk that they may mix together preemptively in the animal and cause some adverse reactions. You're also just giving that animal a little bit of space between where you're putting that product into them.

**Robin Salverson:**

So, if someone is giving more than three injections to a baby calf and that might even include an internal parasite control type injection. So, not just a vaccine, but maybe they're also doing an injectable parasite control, or we will need to really use both sides of the neck, right. I mean, on a baby calf, to think about four inches in between injections on a baby calf's neck, unless I'm not very good with what four inches is, it's pretty hard to put three injections on one side of the neck of a baby calf. Am I thinking through that correctly?

**Addie Womack:**

Yes. You will want to go ahead and utilize both sides of the calf's neck to make sure that you're doing everything correct.

**Robin Salverson:**

So, as I mentioned earlier in this podcast, during a branding, people are kneeling or sitting on that calf's neck, and so sometimes accessibility to that underside or that neck that's on the ground is the side of the neck that's on the ground is hard, but again, it's so important that people understand that you may have to lift that knee up and allow that person to get on that underside of the neck to make sure that we properly give these injections for the efficacy of that vaccine. Also, understanding the Beef Quality Assurance guidelines, regardless if you’re BQA certified or not, we should really be following these guidelines. Right, Addie?

**Addie Womack:**

Yes.

**Robin Salverson:**

I mean, they're best management practices and a lot of people do follow these guidelines, but again, using both sides of the neck may be something we need to consider. So, Dr. Daly, in regard to the intranasal vaccinations, you mentioned that earlier in the podcast. How should they be administered? I know the label, what does the label say? Can we use one side of the nostril or should that vaccination be given in both sides of the nose?

**Dr. Russ Daly:**

Yes. It varies. Some vaccines will say to you, you can use it in one. Some say to split the dose between the two nostrils. So, again, I'd go back to what that label says. That's how the company got the vaccine approved and how they know it works. I mean, for the most part, I think it's better to get it spread out among the nasal mucosa probably, but it probably doesn't make a huge difference. I would still go back to the label just to know where and how to give those vaccinations. We don't have needles for intranasal injections. We have cannulas, but those are still things we want to change every once in a while too because they'll get bacteria and contamination on them, and that just interferes with that cap's ability to respond to that vaccine.

**Robin Salverson:**

One more question. Most of the time when you give that intranasal vaccine, a calf blows out snot. Okay, and so should the individual be revaccinating or is that necessary or not?

**Dr. Russ Daly:**

Might be. Honestly, if you know that it immediately happened and you you've got most of it is on the ground now, the safe thing would be to revaccinate it, but I think you can minimize that by fully inserting that cannula, getting it way down deep into the nasal passage and then forcefully injecting it. So, you're squirting it onto that mucosa, and then even later on, if the calf drips or sneezes then it's not going to be as big an issue. You will have deposited that vaccine on the epithelium, on the skin, and it's already starting to be taken up by those cells.

**Robin Salverson:**

So, if it's already touched the epithelial or the skin of the nostril, that means it's already starting to start the process of working, right?

**Dr. Russ Daly:**

It's pretty quick. It does take a little while and you'll see some vaccines, some intranasal vaccines that are marketed as a little thicker, have a color added to them. So, you can kind of see if a bunch of it is coming out prematurely. So, some of the vaccine companies are addressing that, too, but insert that as far in as you can and give it a good squirt.

**Robin Salverson:**

Changing out those little white tips, most of them are white tips more frequently than probably most of us are doing to tell you that… [[Crosstalk]](https://recordings.civi.com/cgi-bin/player.php?file=CHQ-Ep-58.mp3&starttime=2530&duration=20)

**Dr. Russ Daly:**

The same as what you change in the needle, I'd say.

**Robin Salverson:**

Awesome. So, we focused a lot on vaccinations here during this podcast, but what about those implants, Addie? Some people do implant at calfhood or during our branding time. How should they be administered, those implants?

**Addie Womack:**

So, implants are going to go in the back of the ear, and again, always referring back to what the product says how you should do that, but typically you're going to go into the back of the ear in the middle one-third of that year.

**Robin Salverson:**

So, should we be concerned about cleaning those needles in between calves? So, taking a disinfectant and slushing that needle around in that disinfectant?

**Addie Womack:**

Yes, for sure. Doing that, cleaning those needles between every animal.

**Robin Salverson:**

With a sponge or something like that, that you can - I think that's another thing that and again, guilty about not cleaning with our implant needles in between calves, and again, a very important thing that people should be doing.

**Addie Womack:**

Remembering to clean or to change your cleaning solution, too. If you're going through a lot of animals, that solution is going to get dirty, too.

**Robin Salverson:**

It's important that everyone on your branding crew understands the importance of following those BQA standards because what we do to that calf early in its life affects them into the future. So again, just any last closing thoughts by Addie or Dr. Daly before we shut down this episode of Cattle HQ?

**Addie Womack:**

I'll just add a little promo for BQA trainings. The BQA certification is kind of attached to each individual, not necessarily to your operations. So, if getting your whole team BQA certified was something that is important to you, I know Robin has gone out and done kind of some feed yard trainings, and so that's something that we can totally work with you to do. If you have a big team of people or a group of your employees that get you guys want to go through the training, reach out to me and we can maybe get that planned.

**Robin Salverson:**

Excellent, Addie. Thank you for putting that promo out about BQA. [Laughter]

**Dr. Russ Daly:**

Can I just say too at the end, we talked about a lot of really important things that are referable to BQA and things, and some of these things might strike some producers as, “Wow, that's different than I've been doing it,” but I think we all know the right way to do things, even if it's inconvenient. So, I challenge people this branding season, look at what you're doing and maybe if you're doing a lot of things that need improvement, maybe just pick one this season and make that change for the better. It's not only going to benefit those cattle later on but think about all the people who are helping you and the youngsters who are helping you, too and demonstrating the right way to do things for those future generations is important too.

**Robin Salverson:**

Thank you, Dr. Daly, for sharing that because I mean, we do need to really educate, instruct, demonstrate to our young people. I mean, I love going to brandings where there is a little person right by my side and I get to show him or her the proper way to do it and then they get to do it, and it really makes my heart happy. So, if we can do it, teach them the right way right away, that makes it a lot better. So, I love when I can take my nieces and nephews to brandings, too, and say, “This is how you should do it,” and they're like, “Oh. This is super cool, Robin. Thank you for allowing us to come and help do this, too,” but we are producing product that's going to feed hundreds of thousands of millions of people, and we want to make sure we're putting a product out there that is safe for all of our consumers. So, before we end this episode of Cattle HQ, I want to give a shout out to our Cattle HQ live webinars that are being held every month on a variety of topics. You can register for those Cattle HQ live webinars at www.extension.sdstate.edu., and these are free one-hour webinars. Once again, this has been Cattle HQ brought to you by SDSU Extension, headquarters for all things beef cattle. Visit extension.sdstate.edu for the latest beef information. Until our next episode. The best way to improve your looks is to smile.

**Kiernan Brandt:**

Thank you for tuning into this episode of Cattle HQ. Brought to you by SDSU Extension, headquarters for all things beef. We invite you to visit extension.sdstate.edu for the latest beef information as well as subscribe to the show on Spotify. You will also find show notes and resources from today’s episode, until next time. Remember, success is not a goal, it’s a byproduct.

[Outro music]