## The Economic and Production Benefits of Artificial Insemination (AI) on the Wilson Flying Diamond Ranch

## Season 1, Episode 54

[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, cow-calf field specialist, living the life in Lemmon, South Dakota. Our guest on this episode is Jaclyn Wilson, a lady that keeps busy on the ranch as an artist with a welding torch, and a writer. Welcome to Cattle HQ, Jaclyn. In my introduction, I mentioned you’re a writer and that’s exactly how I found you. It was actually an article that you wrote in the Tri-State Neighbor, and it just really sparked my interest because you were talking about AI, and the cost of AI.

**Jaclyn Wilson:**

Thanks, Robin.

**Robin Salverson:**

Yes. I was really excited about finding that article. I read the Tri-State Neighbor, but I just was glad to see that article because my background actually is reproductive management, and I get to teach people how to AI, and so finding this article just as like, “Excellent. I need to get Jaclyn on my podcast.” [Laughter]

**Jaclyn Wilson:**

Well, thanks, Robin and thanks for the invite. Yes. I do write weekly editorials for Midwest Messenger Family, which Tri-State is part of that, and so they got to about 65,000 producers every week throughout the Great Plains.

**Robin Salverson:**

Wow.

**Jaclyn Wilson:**

The nice part is they give me freedom to write about what I want to write. Sorry about the noise in the background. We’re trying to get set up right now for branding tomorrow, so the crew’s pulling the Daniels around, so it’s [Unintelligible] this morning. [Laughter]

**Robin Salverson:**

I can’t hear a darn thing, but I’m glad you’re able to hear…[Laughter]

**Jaclyn Wilson:**

No, I can. [Laughter]

**Robin Salverson:**

I’m glad that you are with us. Just to kick this off, when I talk to folks about AI, several folks tell me they let the bulls do all the work. Why would we even consider AI? That’s a lot of extra effort. In your article you mentioned that you guys, on your ranch, have been AI’ing for over 30 years.

**Jaclyn Wilson:**

Right.

**Robin Salverson:**

Why is that?

**Jaclyn Wilson:**

Yes. See, now we have been AI’ing for over 30 years. I think the biggest reason that we originally got started is it was a way for us to bring in top quality genetics into our herd a lot faster than we could afford them if we went out and purchased the bull. That was the biggest benefit for us. Then not only that, but it really helped synch our cowherd up into a shortened breeding season. I get asked, time and time again, “What’s the quickest way you can increase uniformity in your cow-calf?” I said, “It’s easy. All you got to do” - I’m going to totally move a little bit out of the noise here.

**Robin Salverson:**

Okay.

**Jaclyn Wilson:**

I said, “All you got to do is shorten that breeding season, and AI gives us that opportunity to do that.”

**Robin Salverson:**

Awesome. Anything else that, any other reasons – those are some really obviously important reasons, major reasons why you guys are AI’ing, but over the years, have you ever thought about saying, “We are done with AI. This is too much.” [Laughter]

**Jaclyn Wilson:**

I’ll be honest, there was a time back when I originally came home from the University of Nebraska, and we were doing, we were heat checking everything, instead of working with synch programs and that was definitely - because we calve May-June, and so we are AI’ing for that first week of May, and so if you figure out the - you start backtracking your days there, we’re AI’ing sometimes in the heat of summer, and there would be days that we’d be riding in heat during the middle of the day or getting cows in in a 100-degree temps and we’re like, “Why are we doing this?” Fortunately, there’s been a lot of great resources that have come out, and now we’re using the 7x7 synch and it’s made it about as easy for us as possible. There’s really not a downside now, and it’s one of those things that we do every year we’re like, “Boy, that was easy.” [Laughter] Then I think it’s really rewarding, too, because I don’t buy outside bulls. I utilize our own genetics to develop bulls, and so half of those bulls, of course, the sire side, is coming from that AI’ing, and so the only bulls I do keep are out of AI sires, and so it’s, like I said, it’s a way to bring in genetics that otherwise we may not have the capability to use just because we couldn’t afford those bulls out of a production seller, or half sibs or anything of those producers. It’s a great thing, overall, for us, especially when we started factoring the cost issue. This was the first year that I kept track of absolutely everything, not only the cost of the CIDRSs and the shots and every - but we started to look at what does it cost us in labor, and the time that we actually commit to AI’ing. Then what would it cost us if we decided to utilize bulls instead, and on a year by year basis, I found about a $50,000.00 difference in cost for AI’ing this year, by 250 head of cows as opposed to if I would have had to purchase bulls for those same cows. That’s a pretty significant economic advantage right there for us, and one that, I was pretty pleased with the overall results of.

**Robin Salverson:**

With that 7x7, you actually have to bring those cows through an additional time versus doing a CO-Synch + CIDR protocol for instance. How did that affect the logistics? Did it affect you? Was it a negative? That is one of people’s downside they’re like, “I don’t want to continuously run my calves that down that alley. I have to sort those calves off again and run those calves down through again.” Was that a hardship for you guys?

**Jaclyn Wilson:**

I think it’s always a challenge when you bring cows in an additional time. Well, when you bring cattle at any time, you’re already running up against a challenges, and one of the things that we’re really seeing over the years, and utilize, is different pasture rotations in terms of where we’re bringing those cows at every time. This time it worked. We were able to bring them in a different direction every single time we brought them into the corrals, so they were able to flow in nice and easy. We weren’t fighting them coming in because that’s usually the biggest hardship for us is fighting them to get them into the corrals. Once we get them into the corrals, they work great, but the cows know what’s going on. We felt like, “We had the upper hand on them in a way that we were confusing them around, ‘We’re going to bring you in this time, but next time we’re going to bring you in from this way and this direction,’” and it worked out really good. We also made sure we had backup plans, too. The other thing that I really like to do is - I was just talking about, we have a Daniels Alleyway over here. We do use a double Daniels Alleyway, it’s about, what are they, 45-foot ling or so. I do not put a chute on the front of them, so I never catch a cow in the chute during the entire AI process. I’m putting in CIDRs over the side. We’re doing any PG or GnRH sides over the side, and that also gives us a little bit of an advantage, too, with how those cattle work because they can flow right through that alleyway, they’re not worried, we’re not taking that extra time about trying to get them into a chute of any kind, and I think that’s also a timesaver for us, too.

**Robin Salverson:**

Absolutely. That does make a big difference. Then, like you said, it’s just that animal behavior, too, and you’re not having to stop everyone of them in that chute, and that does slow things down and also impacts the flow of that animal. I believe that a lot, like, “I see something I don’t like coming up because every time I come into this thing, I get squeezed, and something happens to me,” and et cetera, so it is nice to just get that flow and keep things moving. You had mentioned – let’s go back to that cost analysis that you did. When I talk with producers a lot, too, they always say that AI is so much more expensive, but you found that it wasn’t at all, but also, you took into consideration the full year of feeding that bulls that you had, but when we think about natural service and only using natural service, or even our clean-up bulls than AI, we have to take into consideration those cows that that bull didn’t get bred either.

**Jaclyn Wilson:**

Absolutely.

**Robin Salverson:**

A lot of people are like, “Pft,” they don’t think about that. You got to think about “Okay. Those bulls,” so with natural service, and you got a 90% stick on your cows through natural service, there was still 10% of them that you had to sell but there’s still a cost against that bull.

**Jaclyn Wilson:**

Yes. Absolutely.

**Robin Salverson:**

I think that a lot of people have to think about that, not just the purchase price as you mentioned, but what it takes to feed that bull throughout the season, and then also that expense against them because of those open cows that you have.

**Jaclyn Wilson:**

Yes. What I did, Robin, in determining so we can actually give some producers out there some solid numbers, and I don’t have them right here. I’m just going off of my memory, but – so what I did is analyzed all different aspects of it. I said, “Okay. Every time that we left the shop to go round up cattle to the time we got back to the shop,” I was keeping time of it, track of the time that we were using to actually work cattle through the chute, what it was costing me if I was paying us all a salary, and I was giving us, I was being advantageous. I was seeing we were worth at least $30.00 an hour for all of us [Unintelligible], and there’s four employees, there’s my dad, myself, and then we have two other teammates that help in the process. I contract my AI’ing out, both my dad and I – well, actually, I think all four of us know how to AI, but it goes a lot quicker if I use a contract through that comes in that day of, and I do semen prep since I’m very familiar with the mating, since I’m the one that did the matings. By the time I factored in the time that we were spending and what that was costing us in terms of salary for everyone, along with the vaccines, along with CIDRs, and then the semen cost, too, on top of that, I got to about a $15,000.00, and this was on 250 head of cows. I was using four main bulls and then along with some extra clean-up semen that I had on hand. It was around a $15,000.00 cost for us, is what it was costing me, which I know for some producers might seem quite a lot, but then if you factor it this way and you say, “Okay. So, 250 cows, let’s just say, 50% conception by AI, so you have bulls and you’re going to breed 125 cows,” well, we run a shortened breeding season here, about a 45-day season, and so I like to figure - because of our bigger pasture size, I like to figure one bull, especially a young bull to 10 to 15 cows, and so I’m like, “Okay. In my mind, I need to have about seven or eight bulls.” Well, if I buy, say, a little bit upper quality bull, say on average around $8,500.00 a bull, and then figure out the cost for running that bull for a year, all of a sudden, I’m getting quite a bit of difference there. It came out to about a $50,000.00 difference between what it would have cost - what I saved by AI’ing those cows instead of by going out and purchasing bulls. Now in my situation, the cost is, of course, different because we raise our own bulls, so we don’t have the expense of going out and purchasing bulls but we still didn’t have though the extra cost of getting those calves up to breeding age, and et cetera, but it was just a good easy example to show for us that it’s definitely worth it, and then maybe even consider, “Why aren’t we even AI’ing more cows?” Last year, when we had the success, and last year was the first year we did the 7x7, I should say the calves arrive by the 7x7, so this would have been the second time we’d bred them that way, it increased our conception rates above our normal AI percentage about 20%, and so I’m like, “Well, it’s already doing more.” We threw in our three – do it – threw in some younger cows in that group, too, that we just preg last week. The breed up on those cows was decent. I asked a vet afterwards, I said, “What does it look like in terms of the breeding season?” and he says, “It looks like everything was bred pretty early,” so we’re hoping that the majority of those were AI bred. I know, on no more calving season time, determine on how many of those actually stuck or not, but this year, it was very successful utilizing that program. Last year was very successful, and it’s to the point now where I think a lot of ranchers around here started to see a lot of fallout in their three-year-old cows. We have the last two years, I’ve got some conspiracies on that but I’m not going to get into those, but it’s definitely something I think we might even be utilizing out coming up in our three-year-olds, too.

**Robin Salverson:**

Yes. You actually are only taking a portion of your cowherd and AI’ing them? Is that what I’m understanding then?

**Jaclyn Wilson:**

That is correct. I’m giving anything the opportunity to be AI’ed from a four-year-old and up, and then I’m selecting them, but after calving, I’m parrying out different directions, and so I’ll have anything that’s at any issue at all, maybe poor performer udders, any situation like that, I won’t put in that AI group. I like to use just more of our top elite cows because those are also the ones that I’m keeping our bulls out of. I am picky about what I do AI to, except this year, in terms of the younger cows, I did throw a couple groups of our younger cows in there just because I really wanted to see what they would do with a 7x7. I’ve heard through the grapevine, it's not as - it doesn’t sound near as successful on heifers, and so I don’t have any experience on that. We used to AI all of our heifers and I quit doing that. Now it’s been probably about four, five years ago I stopped AI’ing heifers and just doing the older cows, and the reason for that is I was doing a 28-day breeding season at that time on the heifers, and if you did a synch program, you didn’t have enough time for them to really cycle back in order to catch them up on that clean up, and so I went to a 45-day program on the heifers and doing all bull breds, and now it seems to work really well. Since I raised all the bulls, it also gives me a lot more control on our birthweights. Since we have done that, the number of dystocia issues has decreased dramatically since I quit AI’ing my heifers and just do it off of our own home-raised bulls.

**Robin Salverson:**

Excellent. Have ever thought on those heifers doing just a natural service but just doing a one-shot prostaglandin with them to see if you could tighten them up even a little more within that 45, because that’s still a really short breeding season, right, but have you ever thought of doing that, or have you done that?

**Jaclyn Wilson:**

I haven’t seen a need for it yet. Let me explain why, it’s because - so the last couple years, we’re hitting over 90% on that 45-day season on heifers, and so we hit 92% this year. For me, if they can get bred in 45 days, they can go – [Side Conversation], [Laughter] and so I feel that until we start seeing a significant drop in conception rates on those heifers, I’m not going to because for the fact of having to run them through the chute. Hopefully, we won’t see that decrease any time soon.

**Robin Salverson:**

Yes. I don’t expect that, actually, Jaclyn, at all. Like you said, you’ve been selecting those heifers, you know the genetics, you’ve been using a short – so there’s a lot of things going for you that I don’t expect you to see a decrease at all in your heifers. Kudos to you guys. That’s pretty awesome on your management and everything that you guys have been doing.

**Jaclyn Wilson:**

Thank you. Robin, just a second. I think there is a lot to be said about the university studies on that that really encourage producers to keep offspring or replacements that are within that first cycle, or within that first 40 days. We’re really conscientious that we do have kept performers at it for longer than we’ve AI’ed, and so just understanding when those birthdates are - well, I keep a younger, a calf born in that later part of that 45 days sometimes but they have to be pretty special. As long as we consider keeping those replacements right up towards the front of that breeding season, I think that that’s really helped with some of those reproduction issues also.

**Robin Salverson:**

Absolutely. I know Nebraska has done work on that, South Dakota has done work on that, when keeping those females that were born earlier in the breeding season, not only - well, obviously, they have the time to mature for you, get bred up, also hopefully, in that first part of the cycle that may get bred, but also longevity. Have you noticed that in your cowherd, the longevity?

**Jaclyn Wilson:**

Yes.

**Robin Salverson:**

To me, one of the biggest concerns in the beef industry is longevity of our females.

**Jaclyn Wilson:**

No, it absolutely is. Yes, I do. Actually, I had made a decision this week, and I had a 17-year-old cow that ended up bred again.

**Robin Salverson:**

Wow.

**Jaclyn Wilson:**

She’s staying around here another year. The thing is we don’t supplement them with anything additional in the winter. If it’s a blizzard, they’ll get hay. Otherwise, they might get some tubs and we did find a high-protein mineral this year just because we’ve been in a severe drought but we do have significantly some gray old cows here. My grandpa used to, when he was running the operation, everything used to go to town at 10 years of age, and what we found out is we’ve got a number of those cows that are producing into 12, 14, 16 years, and I think it’s not maybe necessarily so much the genetics. I think it’s how we develop them too. We calve later. We wean in October. Then those calves are ran on grass until the end of the year, and then they’re in their background lot, but I’m only putting about a 2-pound ADG on them and that’s it, and so I feel like we’re really trying to develop those room and get a nice cover on them but they’re not fat. I think that’s one of the problems that I see time and time in the industry again is we’re getting cattle too fat, both females and males, and then what happens is if they’re not able to maintain that condition, the first thing that shuts off is that reproduction stage, everything to do with reproduction. We body condition score cattle every year. I really want them to keep them in that about five to six range as ideal for here and for year-round, and if we get out of that one direction or another. I know my fall, like that fall calvers, too, they’re going to be coming in around six at calving time, which is a little fat for me but I know they’re going to lose it. I think those are also the big things is just we got to quit pushing cattle so, so much. We got to develop them properly and in turn, I think we’ll have better success with reproduction.

**Robin Salverson:**

Absolutely. I know you have a lot going on, Jaclyn, so I want to probably just wrap up this episode so that you can get back to doing your daily tasks and also getting ready for branding tomorrow, but if you had to share any advice with the listeners on this podcast, what would that be to help improve that reproductive success and, like I said earlier, where you were talking about a shorter calving season, synchronization, AI is not the only way to improve reproductive success. It actually can cause more failure depending on how you’re set up. With the listeners, what would you like to share with them? Any advice when it comes to improving reproductive success on your operation?

**Jaclyn Wilson:**

I think the biggest thing that I could say to producers is just keep track of data. Know not only individual animal data but also start analyzing everything every year that you do, whether it’s the nutrition aspect of it or your preg rate percentages or how many bulls you’re utilizing, and keep track of data. We utilize a couple different computer programs to do that both on the pasture side and then also on the cow side, and so that gives me an advantage every year that I can go back and compare data from previous years and see maybe where we need some adjustments. I think the other thing is if you got some poor producing cows, get them out of your herd. There’s no reason they need to be in your herd. You don’t need to have those genetics continue on in a herd. They’re not going to better your herd at all from a reproductive standpoint, because an open cow is not worth any – I should say they’re worth money now but that’s not going to continue your proper economics on your operation, so – but you need to have that data there. That’s something that we’ve done for – my grandfather used to keep track of data on 8x4 notecards back in - oh, my goodness, I can’t even, it was probably 70, 80 years ago, we’ve been tracking individual animal data, and I think that’s what’s really helped us out over the years.

**Robin Salverson:**

Excellent. I actually wanted to circle back, I said we were going to wrap up, but I did have one more question. [Laughter] I am so sorry.

**Jaclyn Wilson:**

No, you’re fine.

**Robin Salverson:**

You talked about that you have a grazing rotation throughout the summer, and that’s right in the middle of your breeding season because, like you said, you’re May-June calvers, so you are breeding later into the summer, and some people have that mentality, it’s like, “I can’t AI. I can’t do that because we are out on grass doing - and I just can’t bring them in, or we can’t do X, Y, Z.” Obviously, that hasn’t hindered you guys at all.

**Jaclyn Wilson:**

No, it hasn’t. There’s a couple reasons for that is because I don’t have – we’re a later calvers, we don’t have to utilize those pasture around our house to calver. I pasture calve everything. I’ll go out once a day, weight tag band if needed, and then – so what it does is it frees up those pastures for me around the corrals, that I could put them into a rotation there during breeding season instead. I know not everybody, I know there’s a lot of producers out there that has specific winter ground and summer ground, and fortunately for us, it’s really important to me that I hit pastures at different times every year just so I can get the plant diversity. It works for this operation doesn’t mean it works for everyone. Now in the past, too, where we have AI’ed back, like I said, for many years, there’s been times I know we haven’t been anywhere close to corrals, and then we take the facilities to them. Whether that’s we’ve got all our portable corrals set up here that that’s what I’m setting up today, that are really beneficial, and they have more than paid for themselves over the years. From even just a stress perspective on the aspect of the cattle and how they’re handled is I think sometimes it doesn’t, it’s not a benefit to bring cattle to the corals. We just take the stuff to them. That works out great, too, for us.

**Robin Salverson:**

You have built flexibility in about every aspect of your operation. [Laughter] Really, which is I think really great because the - when people have the mentality that, “We can’t do that,” I think they’re already setting themselves up for failure regardless because they don’t have that open mind and that flexibility to accommodate and help themselves in their operation.

**Jaclyn Wilson:**

You’re spot on, and I think that’s actually one of the biggest things that I see that’s going to cause some gray issues in our industry over the years as those generations that say, “We’ve done it this way forever. We have to continue to do it this way,” and I am of the mindset that, “Hey, okay, well, if you’re going to tell me I can’t do this, I’m going to figure out a way that I can as long as it benefits my operation.” Fortunately, my dad and I are partners in our operation, and he’s very openminded. His dad was openminded about bringing new ideas and thought processes into the operation, so for me, that’s the generational mindset is to keep thinking outside the box, and so we’re very fortunate and blessed to be in an operation that thinks that way, that there’s always a way that we can figure out to do something, but it is, the key is the flexibility part of it. We know for a fact at what day we’re going to AI, and then we just set up everything around that, so yes. Does it take planning? Does it take thought process? It does, but boy it’s been more than worth it, not only from an economic standpoint but also from a genetic improvement standpoint. The data is there for us, for what I’m seeing in our herd, and it’s getting us to my personal genetic goals faster, and I mean, it’s definitely - I would highly encourage any operation to look into it because it has definitely benefited us for the better.

**Robin Salverson:**

Awesome. Well, thank you, Jaclyn, and thank you for joining us today from the pasture.

**Jaclyn Wilson:**

[Unintelligible]

**Robin Salverson:**

That’s what’s great about doing everything virtually here, we can be about anywhere. Before we end this episode of Cattle HQ, if you actually do have an interest in attending an AI school, you can go to SDSU Extension website and complete our AI school interest form and you will be on our notification list, so anyone that has an interest. 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, live a great story.

**Jaclyn Wilson:**

That’s awesome. I like that, live a great story. [Laughter] It’s great.

**Robin Salverson:**

Yes. It’s actually my best friend’s motto in life, and it’s something that I treasure.

**Jaclyn Wilson:**

Yes, that’s a good one.

**Robin Salverson:**

Yes.

**Jaclyn Wilson:**

That is a good one.

**Robin Salverson:**

Well, thank you so much, and you have a great rest of your day and enjoy your branding tomorrow.

**Jaclyn Wilson:**

Thanks for having me.

**Kiernan Brandt:**

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[Outro music]