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We are currently working on taking DNA Samples from 16 herds, ranging from 480 head to 1200 head, to perform three tests. We're doing a parentage test, a marbling test, and an average daily gain. With the results of those tests we can identify parentage so we'll know which bull is producing which calves in the herd. We'll also know if, say we're pulling 10% of the heifers back and using them for replacements, we'll know which bull is the majority bull producing the replacement heifers.

We'll also take the top 10% and call those the best producers, and we'll parent those so that we know which mothers and which bulls are producing those top 10%. But then we'll do the flip over and do the bottom 20% so that we'll know which bull is producing the worst calves, and which cows are producing the worst calves. They claim we have to go two years, so we'll end up testing the bottom 20% two years, and of all those cows that end up putting calves in the bottom

20% are culled, they're out of the herd. And if a bull has more than, let's say 30% of those bottom calves, he's gone that very year. We don't keep the bulls around because the cows are not as replaceable as the bulls are.

Average daily gain is the performance tester. So that's why we have the scales, because at weaning we will actually take those calves, we're doing 30% the first year, so if they weigh over 30% of their mother's weight, then they're in a certain bracket. If any calf weighs under 30% of its mother's weight, then that mother will go into a cull. That's really the bases of all of our testing, is average daily gain; because as far as the feeder, and the producer are concerned there's probably not a better index than average daily gain. It tells us what mother's doing, it tells us what kind of genetics she's passing on to her children, and it tells us what the calf does, over and above his environment.

So that tells us the parenting test. Then the marbling test. The fun thing about the marbling test is that it's almost 98% effective. If we say we have a calf with a positive marbling test that means that he'll be above 50% of the herd. So his ability to marble would be better than the average in the herd, and each herd is benchmarked against itself.

When we do the testing we're mainly working under extreme cold conditions and extreme wind. I remember when we were testing at Chesterfield; it was the 22nd of October. It was snowing and we were standing in probably four inches of snow, working the cows, and they were sloppy and dirty, and the wind was blowing. I had to pull my truck in over the table so we'd have a wind protection over the table, so we could even work there. I had one girl who was running the

Archer, and she would sit inside the truck because she couldn't stand to be cold. So she would sit inside the truck and run the Archer, and we would take the samples and stuff. But it was cold. So the conditions there were extremely bad, but it wasn't anything compared to the spring when we started running the bulls over in Randolph, Randolph is what, 6,500 feet? And it was a spring day, I think we went over there in the sunshine, but by the time noon turned around it was snowing and it was blowing, and it was cold. I mean, yeah, I could not put on enough clothes it was so cold, and it was snowing. We were working bulls, and bulls are real slow because you have to wait for them to ejaculate before you can collect the data, so it was taking a long time. And if they were culling the bull we wouldn't take the DNA anyway, so we had to wait and see if the test was ok. I think we tested 213 bulls that day.



The main things that I work with are those EID tags, electronic tags. In the 6,000 head that I've worked with, I have yet to lose an EID tag if it's placed correctly, placed at the base of the ear. So because of that it's more reliable than a bangs tag, that's much more reliable than a, than a drop down floppy tag, and it's much more reliable than a managers, you know, knowledge of the herd. So that EID tag becomes the basis of identifying everything that we're doing. So without the Archer and without the readers; I mean to be able to connect that EID number with that calf visual ID number, with that sample, with that mother, with that father, it just, I mean the EID is the basis of everything. I don't have anything that I know that can collect the EID and connect it with the samples in the same way.

The Archer is wonderful. I charge it every morning, I start testing, and I can almost test all day long on the Archer without running through a battery. I mean probably about four 'o'clock in the afternoon I'll have to flip batteries on my Archer, but the printer, it'll just keep going. I think I've printed almost three days without charging it. It's incredible. The only other comment about the system I should make is just that the dang people that you have to work with are pathetic and I never get any questions answered. No! Just the opposite. I've never called them that they haven't responded. I think that is really nice. I can be out in the middle of the cows and say I'll get somebody if I call. So that's a comfort.

The value of this to ranchers is that...I mean you can't...what can I say...you can't measure if you can't keep track of things. And so if you don't monitor and measure you just...I mean somewhere along the line ranchers are going to have to say "OK. I need to know what my calves are doing." and so they're going to start measuring things if they want to stay competitive in this market.