I would like to begin by just talking briefly about the haplotype study that was completed and I believe was set in motion at the last World Conference on Guernsey Island. In the U.S., we collected hair samples on nearly 500 females. We sampled daughters of bulls that already had a high reliability on their proof. The goal of this study was to see if there were any haplotypes present in the Guernsey breed that had a negative effect on fertility. As part of the genomic testing procedure, parentage is also verified on these animals. 30 animals had questions on their parentage, most of which we resolved rather quickly. This number was said to be outstanding because we could have easily expected to have 70-80 issues based on what some of the other breeds encountered. The best result of this haplotype study was at the conclusion of the study USDA informed us that they had enough Guernsey information in their database that we could begin to plan for official genomic proofs.

Our first official genomic proofs became a reality last week as part of the regular April proof run. I have not had time to analyze them yet and give you any details regarding the new proofs. Our breeders have been actively submitting new samples on males and females since about mid-February and the one thing breeders really like is the company we are using to do the testing, which is Neogen/Geneseek, can also test for the A2 protein as well from the same hair sample.

I can tell you a few trends regarding specific bulls that we have determined based on early preliminary results from back in December. The Nicolette family from Lang Haven creates some separation from all of the rest at the top of all our lists with genomic data. Bulls like Navajo, Navarro and Nico are all sons from Nicolette that have strong genomic data. One of the disappointments has been that Coulee Crest Grumpy Legend, a bull that rose near the top of our young sire lists based on traditional data, took a significant drop following genomic testing. Most notably his milk proof dropped about 400 pounds of milk. The interesting thing I found is that here in April he received an actual daughter proof and it closely resembles what the genomic data

predicted. It's probably good to note that Legend's two brothers, Lakoda and Logo have a genomic proof that is more favorable and more closely resembles their traditional parent average.

Some of the areas that I think genomics will help us the most are as follows. The most important thing genomics will provide is added reliability to our proofs. Some traits showed as much as a 16-17% increase with the added genomic figures. My hope is that the addition of genomics will help us to better identify new cow families that should be providing some bulls for the next generation of young sires. The A.I. companies will continue to gobble up most of the high PTI or genomic young bulls. However, I hope genomic technology will help identify that second tier of cow families and bulls which can be sampled through our young sire groups. Ideally genomics will also help us eliminate some of the misses we currently have in our young sire sampling programs. As a smaller breed it is more difficult to not only sample enough bulls properly but to find the right bulls that will produce the type of cows we are looking for. My hope is that genomics will greatly help us in this area. I also feel that genomics will allow us to make genetic progress more quickly and to do a better job of keeping pace with the technology of the rest of the dairy industry.

As an Association, my hope is that we will make a requirement that all of our bulls be genomically tested before they are sampled. AGA markets quite a bit of semen for breeders that have collected their own bulls and my hope is that moving forward we will require these bulls to be tested as well before we will market semen. I think it is very important that our breeders test all of the bulls being registered and also many females as well. The more animals we can test and get into the genomic database, the more successful genomics will be for our breed. We have a few independent semen distributors that have been reluctant to test their bulls thus far. I think that only hurts the breed by not having that data included.

I am learning more and more about genomics every day. I never imagined how detailed and in depth this process will be but the more I

learn, the more confident I feel that this technology will be a great thing for our breed. I will try and answer some of your questions.