Hi Chloe:

We received your inquiry and I will give you a few answers here. If you need more or different information, please let us know and we will follow up with that info.

Genomic testing became prevalent in dairy cattle breeding about 10 years ago. Today, the amount of farms that utilize genomic testing before breeding a cow remains limited but it is a growing percentage, I would estimate 20-25% of our farms utilize direct genomic testing in some form before making a breeding decisions. There are a couple of main ways that the information is utilized.

The testing provides an overview of about 20 core traits that give insight as to the genetic makeup of the animal. These can be conformation traits such as stature and udder traits that describe the physical makeup of the animal, these can include production traits such as milk, fat, and protein production, or they can include health traits that predict the immunity makeup of an animal such as mastitis and metabolic disease resistance. The goals of the customer/user determine which traits are most important. An overall index is included with each test that summarizes the total predicted genetic ability of the animal.

In some cases, the customer wants to produce the best possible overall animal that they can, so that user tests their animals to find the absolute best animals genetically and then they mate those animals to the sires with the best overall genetic makeup. In some cases, the genetic test user is trying to find those animals that are at the bottom of the herd genetically to identify animals that they do not want to invest additional resources in for their development. As they identify these lower ranking animals, the user decides to utilize a beef sire on that animal so the genetics do not continue on or they cull the animal from the herd before investing a lot of resources. The third group might utilize testing to identify traits that are specific but important, an example of this would be the A2 gene in milk. A producer trying to develop cows that produce all A2 milk would use testing to find the cows with that gene so they can breed from it and develop a herd that meets their marketing goals.

Those are the main ways that testing is used. Testing is an excellent resource that does find and identify the animals that will be the most efficient users of resources for the future. Herds using genetic testing at a high level do have an advantage in breeding decisions, the additional cost for testing (~$20-38 per test) is what determines how much information is utilized and the return on investment.

Best wishes and let us know if you need additional info,

Kirk Sattazahn

VP of Marketing and Development

kirk7@premierselect.com

610-698-4754 Cell