Do you have customers that are concerned about using bulls that are carriers of negative Receives and Haplotypes? Did you know that GMS 2.0 is a great tool to help you and your customers manage the use of these bulls, while still breeding for healthy, productive cows?

What are Recessives and Haplotypes?

"They are heritable characteristics controlled by genes that are expressed in offspring only when inherited from both parents, i.e., when not masked by a dominant characteristic inherited from one parent."

So, what does this mean for my customer?

- Negative recessive traits can express as an unwanted physical trait, health issues, early death, or early embryonic death.
- If an animal is a carrier, they do not express the negative trait, but might pass down the recessive gene to their offspring.
- If both parents pass on the negative recessive gene, only then will that offspring express the unwanted, negative trait (which might be embryonic death).
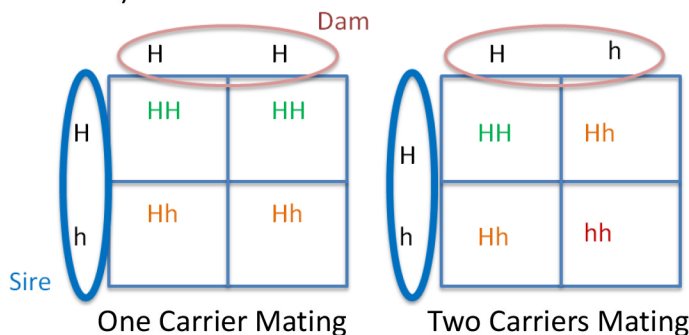
H= Normal gene
h= recessive gene

hh

When mating two carriers, there is only a 1 in 4 chance of the offspring expressing the negative genetic trait.

One Carrier Mating   Two Carriers Mating

How Genomic Tested Animals are Managed in GMS

- Testing reveals whether a cow is a carrier or not.
- If cow is a carrier, GMS will not mate her to a carrier bull.
- If cow is tested free, GMS may mate her to a carrier, if their genetics are complimentary.

How Non-Tested Animals are Managed in GMS

- No one knows if the cow is a carrier of a recessive or haplotype.
- GMS is cautious.
- If a cow has a Sire or MGS that is a carrier, GMS will NOT mate the cow to a carrier bull.
- Does NOT mean the cow actually is a carrier.

Why not eliminate all carrier bulls from the bull population?

If we were to eliminate all bulls that carried recessive and haplotype genetics, you would miss out on opportunities for great genetics. Example: Achiever, Yoda, Pontiff, Aftershock and Crush are all positive for the Haplotype HH5.