

## Balanced Cows

Reprinted with permission from the Stolhaven Genetics Newsletter, October 2014

We as aAa<sup>®</sup> users frequently refer to “a balanced cow”. What do we mean? Some think this refers to too much or too little milk. While that may be an aspect of it, the primary focus refers to the physical structure of a cow.

Is there a link between structure and function? There certainly is. A cow’s structure gives a fairly reliable clue to her production ability, her overall health, and her longevity. And since there is a link, our goal is to breed for a cow that is structurally balanced and thus superior in function.

As Bill Weeks stated years ago, a balanced cow is a cow with enough sharpness to milk and enough roundness to live. Sharpness is typically associated with milk and roundness with meat. But while sharpness added to roundness yields more milk, sharpness added to sharpness may not have the same result. Too much sharpness can sometimes result in less milk because of insufficient stress tolerance. Because round traits are associated with meat and sharp traits with milk, a common perception is that balanced cows milk less than sharp cows. Rather I think a more accurate conclusion is this: sharp cows milk well but *at the expense of good health* while balanced cows milk well *because of good health*.

aAa<sup>®</sup> is certainly the most simple and most effective tool to achieve the goal of balanced cows. Every body part of a cow can be explained with one or more of the following traits: Dairy<sup>SM</sup>, Tall<sup>SM</sup>, Open<sup>SM</sup>, Strong<sup>SM</sup>, Smooth<sup>SM</sup>, and Style<sup>SM</sup>. aAa<sup>®</sup> considers the relationship of body parts. For example, Tall<sup>SM</sup> is not a linear measurement of inches in height but rather the length of bone in relation to the entire cow. aAa<sup>®</sup> considers the why behind a problem. For example, low milk production can be due to much roundness such as (indicated by) saddle loins or too much sharpness such as (indicated by) shallow chests.

While aAa<sup>®</sup> is the simplest and most effective tool used to breed balanced cows, the art of breeding balanced cows can be perfected. aAa<sup>®</sup> numbers do not portray the degree of extremeness of a trait, thus studying the cow’s pedigree and the bull’s pedigree, seeing the bull himself, seeing a bull’s daughters, and using the bull’s linear proof are all helpful in creating a balanced cow. We use these perfecting tips as secondary tools and in the framework of aAa<sup>®</sup>. While aAa<sup>®</sup> increases the number of good daughters from a sire, it does not eliminate the necessity of selecting a good sire. Also while extreme bulls have good daughters, balanced bulls have good daughters more consistently.

Offspring from aAa<sup>®</sup> matings are superior in function. Balanced calves are healthier due to more strength and stamina and greater chest size (capacity) for healthy lungs. Balanced cows are less susceptible to postpartum metabolic disorders such as ketosis, DAs, and respiratory problems. Balanced cows have better reproductive health. Balanced cows have lower SCC for several reasons. Sharp-featured teats are more susceptible to milker damage resulting in hyperkatoxis, good udder texture allows for better milkout, and balanced cows with bigger chests and bigger nostrils maintain a healthier cow with improved blood circulation to the udder, improved udder health, and improved pathogen resistance. Balanced cows possess longevity, the current quest of many dairymen and geneticists who have learned a lesson the hard way.

While balanced cows are superior, they do not eliminate the need of a good dairyman. Keep up your good work and improve your profit margin with balanced cows.