# aAa Animal Analysis:

# Systematic Breeding Guide to Help Make Better Breeding Decisions

There is a wealth of information available to help select the right bulls to use in your herd: Total merit rankings, genomics, linear traits, pedigree and cow family information... the list goes on. Once you have selected the bulls, the next step is to ensure that each bull is mated to right cows to get the best



he dairy cattle breeding guide aAa was founded by Bill Weeks in 1950 and the program continues to operate in the same manner today. Weeks had been a classifier with the Holstein Association, and he was also a successful breeder who owned the Skyway herd in Vermont. aAa (Animal Analysis Associates) identifies the qualities a cow needs in a mating, and identifies the qualities a bull will supply to a mating.

### **PATTERNS**

'An animal can only function as well as her physical form allows, explains Bill's daughter Mary Weeks Dransfield, who along with her husband David Dransfield, owns the aAa Animal Analysis network today. 'aAa analyzers examine an animal's physical form to identify patterns and understand the relationship of body parts, because each part influences the function of other parts and of the animal as a whole, she

## **COUNTRIES WHERE aAa HAS CLIENTS**

aAa currently has 26 approved analyzers worldwide, serving client herds in the following countries: U.S., Canada, Austria, Belgium, Czech Republic, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Sweden, Switzerland, United Kingdom, Australia, New Zealand.

continues. 'Then we describe those patterns for cows in the order of need and for bulls in the order of possession. There are 6 physical patterns used in the aAa system, identified by numbers and names: 1 "Dairy", 2 "Tall", 3 "Open", 4 "Strong, 5 "Smooth, and 6 "Style".

Each year over 2,000 bulls are analyzed at bull studs in 23 different countries around the world. In addition, approximately 300 private herd bulls are also analyzed. The aAa numbers for over 80,000 bulls that have been analyzed since 1950 are all available from the on-line data-base on the aAa Animal Analysis website.

'We currently have about 8,750 aAa client herds worldwide where we analyze cows of the various breeds. That includes all major dairy breeds plus such breeds as Montbéliard and Fleckvieh, as well as crossbred herds,' explains Mary. 'We have 26 analyzers worldwide, and we would currently like to have more analyzers in the US. We are seeing the greatest growth of aAa in the U.S., the Netherlands, Germany, Belgium, France, Ireland, Switzerland and Sweden. aAa users identify good bulls that fit their breeding goals using evaluation methods like genomics, TPI ranking, linear, pedigree, etc. Then they match the aAa numbers of the cow and bull as closely as possible in a mating. This results in fewer offspring with extreme, poorly functioning physical form, as well as a more consistent and balanced overall herd with multiple generations of aAa use.'

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Has the arrival of genomics made any difference in how people use aAa? 'No. Our aAa clients use genomics and other forms of evaluation to choose good bulls that fit their breeding goals, comments Mary. 'aAa is not an evaluation; we do not determine if an animal is good or bad. Our clients use aAa to know which bulls are best used for which cows to create above average daughters from the bulls they use, the same as they have since aAa began in 1950.'

### WHOLE-BODY

'For Holsteins in the U.S. and Europe, aAa 6 Style,

aAa 5 Smooth, and aAa 1 Dairy are less commonly found,' confirms Mary. 'We do not see these trends

as much in other breeds and in other areas.'

to function. aAa is the only breeding method that explains the cause, and therefore the solution, to problems of form and function, continues Mary. 'For example, linear may measure the degree of "posty legs", or "reverse udder tilt", while aAa views those traits as part of a larger, whole-body pattern. The solution to help the next generation is to use a bull that brings the pattern of physical form that the cow needs. aAa does not look at single traits and breed "opposites" together. In aAa there are no opposites. Problems like "posty legs" and "reverse tilt" can have different causes involving the entire cow, not just a single body part. A functional problem in the rear end, for example, can even be caused by a problem of form in the front end. Without looking at the whole animal and understanding the causes of problems, it is easy to inadvertently compound those problems in future generations.'

'An animal's physical form determines its ability

## **Terminology**

The aAa organization has official descriptions that it uses to help explain the six aAa codes. Their terminology is presented here (in italics).

#1. DAIRY: Ample will to milk. Fast milk let down. More milk for size.

Planet bloodlines have been a significant source of #1 in the breed over recent genmost common codes you will come across on bull lists. While a lot of bulls these days are more sharp than round, most are more tall and open rather than dairy.

#2. TALL: Faster growth. High udder for easy care and modern milking.

Tall is certainly one of the most common numbers in Holsteins. Bulls such as Shottle 243 and Goldwyn 234 have helped to move the breed in that direction.

#3. OPEN: Room for udder. Added calving ease. Long breeding life.

A lot of farmers might talk about a nice, open dairy rib, but "open" as it is used in aAa has a little different meaning. Here it is looking at openness through the back-end that provides more space for the udder

#4. STRONG: Larger mature size. Healthy udder, feet and leas, and lungs. The influence of O-Man 435 has been a source of "strong" though he has perhaps more significantly helped to add one of the less common codes, "smooth".

#5. SMOOTH: More appetite. Less injury to teats and legs. Easy milking. Smooth gives you more width in the animal from nose to tail and they maintain good body condition. The O-Man influence is noticeable here. Other bulls would include Shamrock 534.

#6. STYLE: Less foot trimming. Durable bones. Attentive character. 6 Style gives more bone in the rear end from the thurls back. The rump will be longer and the thurls will be more central between hips and pins. The whole rear leg will be made of bigger, more durable bone. Aerostar 651 was a bull that fitted this category. However, 6 is the least common number you will find on top bull lists.

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