We have discussed the challenges of judging, selecting, buying or selling cattle with less than attractive soundness, muscling, leanness, and size. Most of our ideas and comments are not very controversial; however, this time, we suspect the topics of balance and beauty can put some cattle producers on edge. From a science standpoint relating to the entire beef industry, it’s not particularly difficult to define economically relevant traits (ERTs). These are traits that directly impact either values or costs to cow herds, feedyards or packers. ASA’s economic indexes use every EPD we have as either a direct ERT or an ERT indicator. Economic indexes are developed to work nearly perfectly; however, our world and our industry are not perfect.

We know colors and shapes can impact cattle worth even though it is difficult, perhaps impossible, to relate these to reproduction, growth and meat production values. Of course, the EPDs and economic indexes we provide judges and audiences have no reference to color, shape, balance or beauty. However, producers who show cattle must display entries with significant symmetry and balance in order to get noticed, and hopefully, rewarded.

But, there are several physical features associated with showing cattle that have very little impact on commercial cowherds, feedyards and packers, but for decades, beauty and balance (human values) have had significant effects on show ring successes. Without doubt, years of selection for these conformation conditions have influenced seedstock customer demand, and the importance of these often confuse beef producers.

That’s because, not unlike many other industries, the beef business has numerous disconnects which include the interfaces of seedstock, commercial herds, feedyards, packers, and even the needs and wishes of we beef consumers. Too often, the segments are not only less then perfectly focused on downstream customers but have a competitive-edge and subsequently, take advantage of each other. Logically, SimGenetic producers selection priorities reflect customer demand (next downstream customer), and that’s why certain traits are more important to ASA members who show cattle. Many seedstock producers, who show, have customers who also enjoy and need to exhibit cattle for marketing purposes. From the standpoint of traits that impact shows more than ordinary cattle production, we discuss three examples of balance and attractiveness as conformation traits. They are levelness of topline, shoulder and neck shapes, and hair.

**Level toplines:** Strong topped, level rumped, straight-lined are very common terms in our business world. We are not sure of the origins. Certainly, no undomesticated bovine or ungulates have a level topline or hip appearance, so we must have developed a man-made selection importance. This is not to confuse describable differences in musculature, horses and cattle can be very muscular and not very level topped. Perhaps each species has evolved to function best with the skeletal make ups we associate with non-domestic environments; however, we contend that nearly all cattle producers have a certain affinity for level toplines. It’s fair to question whether extreme requirement for show ring winners to be level topped and level (or square) rumped is more important than offering ideal size, muscularity, mobility and EPDs is even reasonable. We do not know of any economic relationships between our perceived physical beauty of lines and the beef production business outside of the general perception that show ring success demands physical attractiveness to often win.

**Shoulders and necks:** It may be that all injured and uncomfortable animals, including humans, display signs that migrate all the
way to our shoulders and neck. We respect producers possessing the skills to detect skeletal and/or health problems signaled from shoulder and neck postures. Our comments here are in the context that an animal's health and skeletal soundness, as described in Part #1, are not affecting the neck and shoulder conformation. So, we will start with the weak and probable misconception that something about an animal's frontend conformation has anything to do with the genetics of calving ease.

In the decades preceding breed association's ability to compute Calving Ease EPDs, seedstock often got meticulous inspections in efforts to identify and perpetuate calving ease genetics. We seemed to be convinced that cattle shoulder-shape differences in the adolescent or mature ages were related to the generic controls of how these animals would be shaped as newborns. All that seems deductive logic.

With ASA performance record collection and sire evaluation leadership, it did not take long to establish that CE EPDs had virtually no relationships to conformation other than high growth cattle have the genetic propensity to have heavier birth weights. Even better proof that conformation has nothing to do with progeny calving ease is careful conformation comparisons between high accuracy calving ease sires and those with average to poor calving ease EPDs. Now days, not many of us would venture to predict the ultimate calving ease of sires by looking at their conformation.

So far, our discussion on frontend conformation focused on shoulders, but it seems we prefer Simmental influenced show winners to be free from the throat, neck and brisket skin-flaps that were very common in European Simmental, Fleckvieh, Pie Rouge, Pezzata Rossa and Montbeliard. We don’t have any particular proof or disproof that neck conformation pays a role in either show ring placings or every day herd enterprise success. However, we hear comments concerning longer necked, more feminine frontend females offered by judges. It is less common to hear comments on longer necked bulls (assuming their skeletal structure and locomotion is normal).

We do not know of any science reports that relate size, or length of skeletal dimensions such as the neck to fertility traits. Certainly, there are physiological abnormalities that limit both male and female reproduction, but most of us have seen very few of these extremely unusual animals. Minute differences in loose skin or muscle thickness of necks almost assuredly have nothing to do with reproductive rates. It would be fair to say that longer and “cleaner” necks that lay more smoothly into the shoulder is primarily a balance and overall appearance perception rather than being tied to economics or fertility.

Hair: Show ring fitted cattle are beautiful to nearly everyone. Thronges of both country and city people push through crowded aisles just to see the fantastically presented cattle exhibits. There’s no need for us to document the role beautiful hair plays in these presentations. Since it’s rather uncommon for “bad-haired” cattle to get selected as class winners, there must be something that hair supports toward showing success.

Other than research relating to animal health and nutrition, the only beef production issue we can think of related to hair is cold and heat tolerance.

Assuming that cattle should be completely slick-haired in warm weather and the opposite in cold, it seems we should select seedstock that perform that way. Respectfully, it is not common to hear skillful cattle producers praise hairy cattle in summer, or comment on strangely shorthaired cattle during cold weather. We have heard testimonial that “kinky, curly” hair does not shed as easily as straight hair. If that is true, curly haired cattle will not work well in hot, humid fescue grass-belt of this nation.

Assuming hair plays a role in body temperature control and reproductive success (reasonable logic to us), then hair plays a role in cows reproductive longevity i.e. stay.

Bulls with high accuracy, high value stay must sire daughters that remain functional for many years. Unless a sire is used in only an extreme geographical region, and his daughters function in only the same hot or cold climates, it is reasonable to assume superior stay sires’ daughters shed and grow hair normally and properly. Obviously many exhibited cattle that grow long hair during summer months are able to do so only because of the environmental controls (i.e.: fans, misters, air climate control) that our exhibitors perform on show cattle. It is ironic that many producers who exhibit cattle encourage long hair in summer, when we want and expect slick hair coats in hot summer production conditions.

Some final comments on beauty, balance and overall attractiveness:

We’ve never been in a shoe store where Nike sells their products in ugly, ripped, dirty boxes. Somehow in our psychics, we want to believe the attractiveness associated with products (for example in our business, SimGenetic bulls or females) will always be with us as we use the products, even though down deep we know the logos on the box and colors on the shoes don’t make us run faster or further.

By the same token, the shoes better not hurt our feet, fall apart or simply not function properly. We think you understand our analogy of shoes and seedstock. Providing the products our customers want is our lifeline to enterprise and often social and psychological success. For years now, we have assumed profit is the crucial judgment for Simmental influenced seedstock. Perhaps an attractive package is an imperative first step toward the beef industry advancing the importance of ASA members’ cattle to the beef industry, but a profit-driving EPD profile measured by either API or TI better accompany the beautiful and balanced package.
Questions and Answers:

Question: Balance and beauty priorities are very different among our members’ customers due to how each customer plans to use the cattle for profit. How can we keep our ASA members united in a genetic improvement vision, or will we ultimately see large separation of interests?

Reimer: Across the membership of the ASA we realize there are vast differences in environment, available resources and marketing opportunities for SimGenetics. Whether cattle are their main source of income or more of a family project, those who consider themselves serious breeders of SimGenetics will have the goal of breeding better cattle for their environment, resources and purpose. This requires a genetic improvement vision; but they won’t all have the exact same target. It is ASA’s task to provide its members with meaningful and accurate scientific values and information to help map their path to producing SimGenetics with stronger ERT’s.

Rincker: Without a doubt our improvement has been continual and has done so at an accelerating pace. Much of the acceleration has a direct link to the genetics available in our A.I. herdsires, our increased use of embryo transplant both directly and indirectly through purchasing of solid genetics in embryos, and sharper skills at sorting data and culling cattle that do not meet selection criteria. There are differences in the use of our SimGenetics with both maternal and terminal emphasis being placed on selection that will likely keep some variability in our genetics going forward.

Ropp: Beauty is absolutely in the eye of the beholder especially when it comes to these traits. Though most agree on the importance of structural soundness and certain other “balance” traits even these can be evaluated differently by folks with different goals. In fact some of today’s “trendy” phenotypes are rooted in the chase for peculiar, but marketable extremes and clearly reduce function and ultimate production value. I am not sure why we do that to ourselves in the livestock business from time to time, but it is neither the first nor probably the last time. If we are going to strive for greater uniformity, which I think is important for brand building, it seems to me that it is more important to offer solid consistency in the measureable traits than visually evaluated preferences. Your customers will ultimately decide if they are satisfied with the phenotype you offer and reward you accordingly or discriminate based on their own bias. Great looking cattle usually bring a premium at auction, but “great looking” defined in Ohio can be hugely different than “great looking” defined in Montana. Cattle however that calve easily and cows with great longevity are preferred almost everywhere to their alternative.

Question: There are only a few PTP Shows per year. Certainly, the huge majority of shows do not use any genetic data. Does this reduce our members’ inclination to put pressure on ERT genetic improvement?

Reimer: Ultimately, a value will be placed on all the cattle we breed. A genetic map of ERT’s helps to elevate and document that value whether they are shown or not. I do believe in the use of available genetic data whenever cattle are being evaluated or selected.

Rincker: There is growing pressure being applied to the use of the genetic profile of cattle. The majority of the cattle being consigned and sold is done so with either the EPD and Dollar Indexes indicated or provide an ASA number where prospective buyers search the profile. Certainly any of our PTP shows do highlight the emphasis of using economically relevant traits and any additional shows where they have the manpower to handle PTP data would increase awareness of ERT genetic improvement.

Ropp: Those committed to using the ERT data are going to use it and ultimately make a more valuable product regardless of its inclusion in PTP shows. I do think however, that for the higher profile breeder events, the use of EPDs as part of the evaluation process has been a good idea from the beginning. For one thing, it helps to bolster our industry reputation as one of the breeds that uses the science and information to make better cattle.
and better beef. It too can be truly sad to watch a champion, particularly a champion bull be crowned that will ultimately get almost no use because his genetic profiles are substantially below average in too many traits.

**Comment:** For nearly a century, livestock judging has been an effective youth teaching method of developing personal skills. Obviously, combining genetic information and physical features can be too complicated for very young people. Please suggest how we can progress with both youth education designed cattle evaluations, and scientific genetic improvement.

**Reimer:** First of all, don’t underestimate our youth. In our county 4H program, as a foundation, we have started with a simple single trait situation with data numbers having significant differences and had good results with the kids understanding the process reasonably soon. Once they understand the process, the scenario is advanced.

**Rincker:** The use of performance judging classes with data, contests with Question Classes that relate to the data, and giving Oral Reasons on a Performance class have all inspired young breeders to understand genetic information at earlier ages. I see the increased use of State Beef Skillathons, AJSA Nationals, and our 4-H and FFA Organizations all imbedding more use of data, scenarios, and performance information, at a younger age so my advice is too simply encourage our youth to take part in these educational and enjoyable opportunities.

**Ropp:** In general it seems easier for young people to blend the use genetic information and phenotype in combination than a lot of us older folks.

Our junior programs need to maintain a substantial educational component in order to remain relevant. Offering a junior livestock program that simply encourages the handing of a halter to a young person who has gained neither experience nor knowledge about this business is simply promoting a value-added marketing program. These activities need to take advantage of the one of a kind outreach and education opportunity that is inherent in high responsibility educational programs. Young people have a huge capacity for learning and growth when challenged in a positive way. The more you expect from them the more they grow and excel. Participating in a well-designed junior livestock program that includes showing can teach more disciplines that we even consider looking from the outside. Responsibility, discipline, biology, finance, self respect, making friends, integrity, work ethic, genetics, nutrition, animal husbandry, reproduction, commitment, goal setting, public speaking, pride in accomplishment, safety, livestock industry education, travel skills, understanding life and death and much more can all be taught using a livestock project as the primary teaching tool. Not many other junior educational programs offer that level of life skill learning opportunities. We all should focus on the desired growth outcomes of junior livestock programs to make them better, not just the short-term rewards. Oh yeah, and don’t forget to make them fun and rewarding for the young people and their families.◆