

SimGenetics and 70:70, a Perfect Match

The first in a three-part series dealing with the strengths of Simmental-Angus cross cattle.

By Jerry Lipsey, Ph.D.
ASA Executive Vice President



Have you visited www.7070beef.com? I hope you have reviewed the 70:70 Grid Specifications listed there. We have convinced JBS Swift & Company to pay significant premiums for fed cattle that are:

- A. Age and Source verified with an EID through an approved service supplier such as SimChoice.
- B. A high percentage of Choice, Yield Grade (YG) 2s.
- C. Very few YG 4s and 5s.

Our ASA Carcass Merit Program data (which is now approaching 10,000 cattle) clearly show the most ideal cattle bred to fit the 70:70 Grid specifications are Simmental x Angus and Red Angus. Although we do not have sufficient data to make the same conclusions, we suspect Simbrah x Angus and Red Angus will most ideally comply where Brahman blood enhances cattle production.

Our data show that 70% Choice and 70% YG 2s are achievable when Simmental and Angus blood are combined so that neither Angus nor Simmental percentages exceed 75% or are less than 25%. Incidentally, growth performance, feed utilization and pen uniformity (weight, frame size, etc.) are often optimized with these percentages. Certainly, the same expectations would be appropriate when Simbrah are the source of Simmental blood in the cross.

There are two common methods to breed these ideal crossbreds. Combining either purebred parents (example, Simmental bulls and Red Angus cows, or Simbrah bulls on Angus cows), or composite-designed parents (example, SimAngus bulls on SimAngus cows, or Simbrah x Angus bulls on Simbrah x Red Angus cows) will produce offspring with proportions of Simmental and Angus blood typically capable of excellent Quality and Yield Grades. For many years, each of these idealistic production systems have encountered the following challenges:

- A. Difficulty maintaining ideal percentages of breeds, when purebred bulls are used in the mating systems.
- B. Challenges of breed associations developing databases and scientific protocols for percentage (composite, hybrid, etc.) bulls with verified pedigrees, performance, and EPDs.
- C. Challenges of determining the EPD requirements (marbling and YG) of both Angus and Simmental sires to produce 70:70 progeny.

The first and most commonly recognized problem comes from using only purebred bulls. If a balance of 50% Simmental and 50% Red Angus is best for the pro-

duction and marketing aspects of a herd, how can the offspring be 50:50, when purebred bulls are used on anything other than purebred females? Crossbreeding systems utilizing purebred females is almost silly. The power of heterosis is in the crossbred females! Essentially every farm and ranch that intends to maximize the value of hybrid vigor, keeps and uses crossbred females, not straightbred females.

Sure, purebred Simmental and Simbrah bulls on Angus-based cows could work for two bull-generations. Then you have a mixture of the remaining Angus-based cows, and half-blood and three quarter-blood Sim-sired females. Uniformity suffers. In herds that use just one herd bull, the only sustainable way to maintain control over the percentages of Simmental and Angus blood is to use bulls containing the preferred percentages. For example, if the enterprise benefits most from cattle with $\frac{1}{2}$ Angus, $\frac{5}{16}$ Simmental and $\frac{3}{16}$ Brahman, then bulls that are $\frac{1}{2}$ Simbrah and $\frac{1}{2}$ Angus should be developed and utilized for generations.

The ASA Board understands these issues well, and designed the SimAngus trademark to validate pedigreed seedstock in our database that:

- A. animals at least $\frac{1}{4}$ Simmental and $\frac{1}{4}$ Angus or Red Angus, and no more than $\frac{3}{4}$ Simmental or no more than $\frac{3}{4}$ Angus or Red Angus.
- B. both parents registered in the database of ASA.
- C. the sum of Simmental and Angus or Red Angus blood is at least $\frac{3}{4}$.

SimAngus stabilized at 50:50 are extremely popular; however, many ASA members are also marketing SimAngus ranging from 25% to 75% Simmental. The remaining 75% to 25% Angus can be either Angus or Red Angus. Our Simbrah breeders are just beginning to develop composite seedstock that includes registered Red Angus or Angus parents.

Of course, purebred Simbrah crossed with Red Angus result in $\frac{5}{16}$ Simmental, $\frac{3}{16}$ Brahman and $\frac{1}{2}$ Red Angus. These Simbrah x Red Angus will qualify as SimAngus under the official descriptions above (as long as the Red Angus sire or dam is registered in the ASA database with an ASA registration number (\$17 for females and \$25 for bulls). ♦

Next issue: Part II — an review of the challenges for ASA to develop and maintain composite seedstock services.