



By Steve McGuire, ASA Director of Operations

The Association is often asked why some  $\frac{3}{4}$  Simmental animals have calving ease and maternal calving ease EPDs while others do not. The reason is the calving ease evaluation is not a multibreed evaluation yet. It is a purebred evaluation: meaning only calving ease and birth weight records on progeny and grand progeny of purebred Simmental bulls are used in the evaluation. EPDs are only generated on purebred Simmental sires.

All other calving ease and maternal calving ease EPDs on purebred and  $\frac{3}{4}$  Simmental animals are calculated as pedigree indexes using the epds on the sire and maternal grand sire of the animal. The basic formula is:  $\frac{1}{2}$  the sire's epd +  $\frac{1}{4}$  the maternal grand sire's epd. If the dam has calving ease EPDs, the formula becomes  $\frac{1}{2}$  the sire's EPD +  $\frac{1}{2}$  the dam's EPD.

Generating calving ease EPDs on percentage cattle using only EPDs on purebred Simmental sires in their ancestry is not ideal—it does not account for the influence of the other breeds in the animal. For this reason the Association only calculates calving ease EPDs on an animal if 1) it is  $\frac{3}{4}$  Simmental or more; 2) its sire has calving ease EPDs; and 3) its maternal grand sire has calving EPDs.

This results in some  $\frac{3}{4}$  blood animals having calving ease EPDs and some not. The "traditional"  $\frac{3}{4}$  blood out of a purebred Simmental sire and whose  $\frac{1}{2}$  blood dam is out of purebred Simmental sire will have calving ease EPDs. But a  $\frac{3}{4}$  blood out of a purebred Simmental sire whose  $\frac{1}{2}$  blood dam is out of a purebred Angus sire will not have calving ease EPDs. The animal shown in figure 1 is a  $\frac{3}{4}$  Simmental bull with calving ease EPDs, but the bull in figure 2—also a  $\frac{3}{4}$  blood Simmental—does not have calving ease EPDs. The sire and maternal grandsire of the bull in figure 1 are both purebred Simmental whereas the maternal grandsire of the bull in figure 2 is a purebred Angus.

Also, note the lower accuracies of calving ease EPDS compared to the accuracies of the other EPDs for the bull in figure 1. Since he is not purebred Simmental, he was not evaluated as a sire in the calving

ease evaluation. His calving ease EPDs are pedigree indexes. Since he has over 500 progeny in ASA's database, his other EPDs are based on his evaluation as a sire.

Another confusing point is that some progeny out of this  $\frac{3}{4}$  blood Simmental bull have calving ease EPDs and some do not. Progeny have calving ease EPDs if they are at least  $\frac{3}{4}$  Simmental and their dam's sire has calving ease EPDs. Progeny will not have calving ease EPDS if they are less than  $\frac{3}{4}$  Simmental or their maternal grandsire does not have calving ease EPDs.

We are working hard on and eagerly awaiting a multibreed calving evaluation. It will include animals regardless of their breed make up — just like the weight and carcass evaluations do now. The multibreed calving ease genetic evaluation uses a different methodology than the one we are using now and some EPDs will change. But it will better utilize all available information and be a major advancement in ASA's genetic evaluation system. ♦

