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In Good Company

Forming accurate contemporary groups is one of the keystones of good data collection.

by Sara Gugelmeyer

Precise record keeping, consistent data collection and fail-proof submission of the data to the Association is all for naught if breeders don't use accurate contemporary groups when comparing data.

In fact, American Hereford Association genetic consultant and Kansas State University animal scientist Dan Moser says oftentimes inaccurate EPDs (expected progeny differences) can be traced back to errors in contemporary grouping.

"Improper contemporary groups is probably the most common mistake made," he says. "Either animals were put together that shouldn't have been put together, or animals were divided that shouldn't have been divided."

What is a contemporary group?

In layman's terms, Moser describes a contemporary group as "a group of animals that has the same opportunity to perform from an environmental perspective, so they can be fairly compared. Things like nutrition, health protocol, grazing opportunities are the same among the animals so the differences between them are mostly genetic."

When submitting data for genetic evaluation, breeders are asked to group cattle with their contemporaries so that the cattle can be compared for genetic traits. In order to be compared, cattle must be the same sex, age (within a certain window) and breed and have had the same opportunities to perform.

Moser says, "EPDs look for differences between individual animals' performance, like differences in birth weights and differences in weaning weights. The system will assume that environment was equivalent within a contemporary group, so any further differences are either genetic differences or random. Heritability of certain traits tells

us not 100% of the difference is genetic, but proper contemporary grouping accounts for those environmental differences and takes that out of the equation."

For example, steer calves and bull calves must be in separate contemporary groups, calves fed creep feed and calves not fed creep feed must be separated, and calves grazing improved forage should be separated from those grazing native grass, among others. It's

because, by definition, you said they were treated differently prior to birth and those environmental differences are carried on. But you may have a birth weight group that is separated into two or more weaning groups."

Oftentimes, cattlemen sort their pairs after working them and divide them into different pastures. Unless each pasture is completely equal in forage quality and management, those different

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also important to remember the comparison starts with the cow, so calves from cows given different opportunities should not be in the same contemporary group.

"If you've got a group of cows that were fed differently during gestation, then you need to make their calves a different birth weight contemporary group because the birth weight of those calves is going to be influenced by that nutritional difference," Moser explains.

Good grouping judgment

One of the most important guidelines of contemporary grouping is groups can be divided but never put back together. So, in order for calves to be in the same weaning weight group, they must have been in the same birth weight group as well (if the breeder is submitting both weights).

Moser says, "You can't combine birth groups into weaning groups

pastures are now different contemporary groups.

"It's really a judgment call by the producer because they know their pastures and their environment much better than anybody outside their operation," Moser says. "They must ask themselves, 'Are these pastures equivalent?' If the forages are equivalent and the cattle are handled the same and the pastures receive the same rainfall, then it's probably OK to leave those two groups together in a contemporary group. But if you treat one significantly different with supplementation or grazing or stocking rate, then you'd better divide them into two different groups, or you've given an advantage to some calves."

And if there are heifer and bull or steer calves in each of those pastures, that further divides the groups.

Moser encourages breeders

to keep contemporary groups as large as possible, within reason. He says he understands it's not always feasible because of management considerations, but if a producer has multiple pastures, the ideal situation would be to sort the pairs after birth into two large groups: one with heifer calves, one with bull calves. These groupings would give the fairest comparison of all the producer's cattle.

"Then, when a bull calf comes to the top of that group, you know he's the best of all of them, not just the best of the bull calves in one of the pastures, because they are all there together," Moser says. "It just adds accuracy to the EPDs and more dependability because you have more to compare."

Mistakes to avoid

With that said, there are two ways producers can make mistakes with forming contemporary groups: by combining cattle that can't be fairly compared or by dividing cattle that can.

"Probably one of the most common situations is someone gives special treatment to a few calves, because maybe they're going to put these calves in a sale or take them to a show. They pull these calves and feed them or give them more creep feed," Moser says.

Those calves must be a separate contemporary group. Those cattle will have an advantage in weight, probably will be fatter on the ultrasound and may have a bigger ribeye because of the extra feed. If you leave those in a group with calves that didn't get special treatment, the system will assume those advantages are genetic and not environmentally related.

"In effect, you make the EPD values on those animals go up and also make the values on the other animals in the group go down. It's a zero-sum game. And it doesn't only affect the animals themselves but also their dams and sires and so on," Moser explains.

On the other hand, if you take a calf out of its group unnecessarily, you lose the value of the data. "Then its EPDs are just going to be a pedigree estimate; there's no longer anything gained by knowing the weight of that calf because it's not compared to anything," Moser says.

Ultimately, the weight of contemporary grouping is on the producers' shoulders because there is no staff member to come out and make these decisions for each herd. Just remember, "The idea of contemporary grouping is to leave groups together as much as you legitimately can," Moser says. "There are some management considerations producers have to balance, but anything they can do to keep groups comparable and as large as possible really helps the accuracy of the EPDs." **HW**