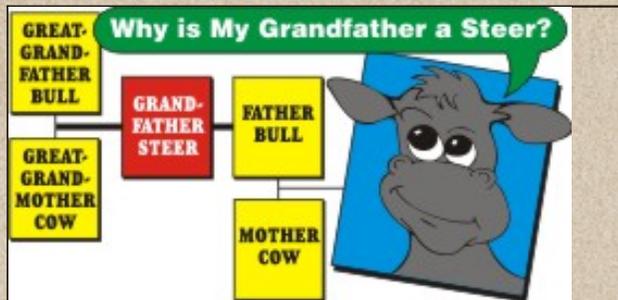




BeefTalk 532: Why Is My Grandfather a Steer?

SUPPORTING MATERIALS



Once a germ line is changed and the DNA modified, the world changes piece by piece.

November seems to come quickly, and soon to follow will be Christmas. The common saying, “how time flies” is certainly true. Likewise, college campuses are in their prime with classes churning vigorously and trying to instill knowledge.

The process is not as simple as vaccinating calves, but one hopes a good response is achieved. Healthier calves and wiser students are good goals to achieve and, when met, good for everyone.

The response will dictate the future and lay the course for years to come.

The genetics class that I teach is no different. Watching minds churn is exciting, if not a bit scary. If one thinks one can rest on his or her laurels and simply accept what is present, one is greatly mistaken. The world of genetics will cause some deep pondering, even if one has a tendency to resist much thoughtful exercising of the mind.

The students are sent out to find new thoughts and return to class with them. Perhaps the common concept of “fetch and retrieve” would be indicative of some of the out-of-class assignments. The fetch command is an easy instruction, but the retrieve is what is exciting. Did you know steers can reproduce? Did you know that geldings can sire future generations?

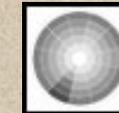
If one progeny tests a group of steers and finds an exceptional steer based on the desired traits, the technology of today can create a clone of the steer calf. That clone would be a male calf. This calf is one lifetime removed and could go on and sire progeny that would be sons or daughters of the steer that excelled in the progeny test.

Likewise, an exceptionally performing gelding could be cloned. The resulting male foal could be utilized in breeding programs to propagate the genes of the gelding, which also is one lifetime removed. Breeding companies could utilize cloned sons of exceptional steers or geldings to fill semen tanks for producer expansion programs for years to come.

However, one cannot be sure how Mendel would have responded, but one could assume that he would have been a little taken aback. Progress is a thin line, and crossing the line is very subtle. To produce gametes one lifetime removed may seem like an academic exercise limited by extensive laboratory expense and ridiculous costs. One also could conjure up a Frankenstein image and many ghoulish kinds of thoughts. However, as the students retrieve, the process continues.



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The genetic world continues to knock on doors never opened. Perhaps, as Mendel would say, those doors never were intended to be opened. However, technology does not stand still. Fetch and retrieve brings more and more literature that continues to propagate the world around us.

Once a germ line is changed and the DNA modified, the world changes piece by piece. The change is permanent, provided the reproductive processes associated with the newly defined organism are maintained. One could say "don't worry" because there only is a one in a trillion chance that would happen. However, given the enormous capacity for gametes to be produced, the one in a trillion chance may not be that far off.

Once changed, always changed, and the sun sets on a new world. Right or wrong, the pendulum swings far and wide. Breed registries used to be closed to make sure that the genetic material of the individual corresponds to the breed or type of livestock the organization represented. As time went on, more and more registries opened up to accept whatever seemed logical at the time.

The challenges of those so-called open-ended concepts never seem to end, and the consequences are seldom fully known. What was once a simple question of whether the Angus bull jumped the fence and bred a Hereford cow now has become a question of what cell was placed where and where did the cell really come from.

Fetch and retrieve. Generally, students are very open minded and seldom are restricted by the things that were not known yesterday. What was learned today becomes tomorrow's reality. In the big picture, if we are not careful, we really have not seen anything yet.

However, simply being able to do something does not mean it should be done. Going to school is more than learning the facts. Understanding the consequences always will be the trump card. What one thinks is better may not always be better.

May you find all your ear tags.

Your comments are always welcome at <http://www.BeefTalk.com>. For more information, contact the NDBCIA Office, 1041 State Ave., Dickinson, ND 58601, or go to <http://www.CHAPS2000.com> on the Internet.

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