



MEMBERSHIP TIPS

by Jerry Cassady, director of member services

Reporting Abnormal Calves

Animals have trillions of cells in their body, all with DNA. Billions of them regenerate daily, and replication must occur. Mistakes happen and are known as mutations.

Environment vs. genetic

Congenital defects can be defined as structural or functional anomalies that occur during gestation. Also called birth defects, these conditions develop prenatally and may be caused by the surrounding environment, genetics or a combination of both. Often, the cause of a defect is never identified or completely understood.

Environmental insults identified as the cause typically result in multiple calves exhibiting the defective phenotype, born within a short time frame, managed alike with unrelated ancestry. Single cases can also occur, complicating the diagnosis. Environmental causes can include malnutrition, toxic factors, infectious disease and even weather.

Once it is determined a specific environmental insult is the cause, changes in management can address the issue and reduce the risk of future incidence.

Hereditary defects occur in all breeds of cattle, as no breed is immune. More than 200 different genetic defects have been identified affecting breeds of cattle, and some inherited defects are specifically linked with certain breeds. When multiple affected calves occur that share common ancestors, genetics are suspected.

Steps for Reporting

Rule 300: Notification to the Association

Any member owner who becomes aware of an unusual physical abnormality, either in an animal registered with the Association or in an offspring of an animal registered with the Association, is required to notify the director of Member Services by email or phone as soon as possible.

Disclosure is always the best policy.

Steps to report observed abnormalities include:

- ▶ Collect DNA samples from the affected calf and the parents
- ▶ Collect photographs and/or video clips of the affected calf
- ▶ Contact your veterinarian for inspection and/or necropsy exam if needed
- ▶ Complete and submit the Abnormal Calf Report

Due to the complexity of these anomalies, and to determine the most probable cause, the American Angus Association uses the services of a bovine genetic consultant to diagnose abnormalities as being genetic or nongenetic.

Action steps

Seedstock producers have an obligation to be honest and forthcoming by notifying the Association when an abnormal calf occurs (see sidebar). If you have an abnormal calf, document the event immediately by taking clear photographs and/or a short video clip and collect a DNA sample from the affected calf and its parents.

Images of affected calves can be captured on your cellular device and sent in real time to the Association, to your veterinarian or directly to a diagnostic facility prior to disposing of the animal.

Preferred sample types for newborn calves include blood (blood card or whole blood in an EDTA purple-top tube) or tissue [tissue sampling unit (TSU) or frozen body parts]. In the case of an aborted fetus, keep the expelled placenta in addition to the fetal carcass and place in the freezer. Placenta is a valuable sample if additional diagnostics are pursued and can increase the likelihood of a diagnosis in abortions caused by infectious agents.

Freezing tissue from dead animals or collecting blood from live animals is critical to properly documenting the phenotype.

The next step is to promptly contact the director of Member Services at the Association and report the incident with the Abnormal Calf Report form found at www.angus.org > Member Services > Genetic Conditions/Policies > Abnormal Calf Report Form. By providing sire and dam information, a pedigree search can take place to research for common ancestors.

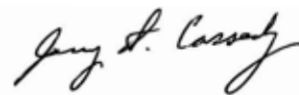
All information submitted is kept confidential, and used only for the purpose of research and

will help develop a more complete understanding of these conditions.

Summary

Thankfully, the vast majority of investigations result in determining an environmental cause. However, it remains prudent that we investigate each reported case submitted to the Association. Success in identifying novel genetic mutations before they become widespread in seedstock populations is a shared responsibility between the breeders and the Association. Remember, it's better to know than not to know, and the Association cannot assist with the situation if we don't know about it.

The full disclosure of observed abnormalities is vital information, as it can minimize the impact and eventually purge the defect from the population. Working together we can better understand the genetics of our breed. **AJ**



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EDITOR'S NOTE: For more information regarding abnormal calf presentations, contact the member services department at 816-383-5100 or email me directly at jcassady@angus.org.



HOBBS & EATHINGTON & NEW THIS YEAR
ANGUS ANGUS
Annual **BULL & FEMALE SALE**

RUTLEDGE FARMS

SELLING:
50 14-18 MONTH BULLS
8 FALL AND SPRING BRED HEIFERS
10 OPEN HEIFERS
15 BRED COWS

FLUSHES FROM THESE ELITE FEMALES
2020 RESERVE DIVISION N.J.A.S. 2021 ISF SUPREME CHAMPION HEIFER

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