

The Recessive Trait Free (RTF) status was the standard for progeny testing sires for recessive genetic conditions before genotyping technologies were available. In order to receive the RTF designation, 35 successful sire-daughter matings along with 35 live offspring must be made available to the Association for inspection. Females must be identified and DNA samples provided to the Association at this time. All aborted, still-born or deaths occurring in progeny must be documented and confirmed by a veterinarian. Any incidence of questionable characteristics or traits should be referred to the Association's designated specialist. The Association will provide inspection of all calves and DNA samples will be collected on all offspring. A complete DNA typing of daughters and offspring will take place at owner(s) expense. An official association letter will be issued to the owner(s) of the bull to denote successful completion. This letter declares the sire is free of all recessive genetic conditions.

Sire progeny tests are fairly reliable but can still result in misrepresentation. Even 35 normal offspring from sire-daughter matings do not indefinitely prove a sire is free of a genetic condition. Since the time of RTF inception, more accurate methodologies to test for recessive genetic conditions are available. Current DNA technologies pinpoint the casual mutations resulting in diagnostic tests for single gene recessive genetic conditions. These diagnostic tests are more accurate than progeny tests to determine carrier status of animals. Because newer, more reliable technologies are available, descendants from RTF sires, who had documented carriers in their pedigrees, will be listed as potential carriers for recognized conditions. The potential carriers will need to be tested following the Association's regulations for the particular defect.

This protocol of testing descendants from RTF-sires is similar to the Association protocol for parentage testing. Earliest procedures for identifying parents used blood-typing mechanisms later replaced by microsatellites. Microsatellites have since been replaced by tests using parentage SNP markers. Parentage test results determined by previous, less accurate technologies can be re-analyzed with the latest methods. Any inconsistencies found with previous approaches are replaced by the higher accuracy test. It is the Association due diligence to provide its members with the latest tools available to make selection decisions, testing for genetic conditions is no exception. For more information on DNA testing procedures, contact the American Angus Association.