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Genomic test for Curly Calf Syndrome in the Ayrshire breed

MIDDLETON, Wisc. — Livestock genomic testing leader and innovator Genetic Visions-ST™ has developed a commercially-available genomic test for a newly identified fatal genetic defect in Ayrshire cattle.

Arthrogyrosis Multiplex (AM) results in calves born with stiffness and/or deformities in multiple joints. The defect prevents calves from producing an essential protein required for normal fetal joint development. Some joints appear curved or crooked, giving rise to AM's more commonly known name, Curly Calf Syndrome. Afflicted calves are stillborn or die shortly after birth.

Genetic Visions-ST™ offers a stand-alone test for AM. Producers interested in learning more about the test or arranging tests for their cattle can talk with their STgenetics® sales representative or contact Genetic Visions-ST™ directly by phone, 608-662-9170, or email, info@geneticvisions.com

AM is a recessive trait, meaning a calf must inherit a copy of the defect from both its dam and sire to be affected. There is a 25 percent chance an AM-carrier dam and AM-carrier sire will produce an afflicted calf and a 50 percent chance the calf will be an AM carrier. Calves receiving only one copy of the defect are not affected by AM.

Experts believe the Swedish Red sire Peterslund (AYSWEM91213), born in 1997, is the original source of the defective gene found in Ayrshire cattle. AM is widespread in Canada because the country imported a significant amount of Peterslund's semen well before the defect was identified. About 20 percent of the Ayrshire heifers born in Canada in 2019 are AM carriers.

The occurrence of AM carriers in other countries varies by the impact of Peterslund's genetics in their Ayrshire pedigrees. AM carriers comprise about 5 percent of US Ayrshire heifers and a combined 12 percent of heifers born in Scandinavia, South Africa, the UK and Australia.