

Managing Arthrogryposis Multiplex (AM) Curly Calf Syndrome

This recessive causes calves not to fully develop properly in the womb due to a lack of proteins missing which form the muscular and bone development.

Affected calves will most likely be still born or will die soon after birth. They generally carry to full term and only rarely is there early embryonic death with this condition. It is not known to be related or linked to any other recessives. Calves that are born alive will be small and undernourished.

The main worry is the possibility of twisted and rigid limbs and spine. Severity of the contorted limbs will vary, but most often the calves are not able to be presented correctly in the birth canal to the extent that a C-section is necessary to extract the calf. The danger is that at the point of labour, you may not realise that you are dealing with a severely deformed calf which cannot pass through the birth canal. Obviously, the stress level to the cow can add other complications or loss!

The source of the recessive is from the overseas registered sire Peterslund 59000000091213. If Peterslund does not show in the ancestry offspring will not be affected.

Below are examples of scenarios of the recessive AM breeding:

1. A mating is between two non-carriers, (AMF) there is no problem and calves will of course be normal.
2. A mating of a carrier (AMC) sire onto a carrier (AMC) dam will be of high risk. 50% of the time the offspring will be a carrier but show no signs of the deformity. 25% of the offspring will be a non-carrier (AMF), but 25% of the time you will get an affected deformed calf. Remember if an animal has no Peterslund in its pedigree, they will not be affected.
3. A mating between a non-carrier (AMF) and a carrier (AMC), you can expect 50% of offspring to NOT carry the affected gene but 50% WILL carry the affected gene. The calves that are carriers will not show the abnormality but will be able to pass that defective gene on to their offspring.

Recessives are common and in all breeds. This recessive is particularly dangerous, but with care and sensible decisions now we can eradicate it or at least substantially lower the AMC population.