

Freezing semen from your colt at the time of gelding.

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Have you ever wished you had semen from your gelding? Or have you had the misfortune of losing your stallion? With thanks to the NZERF a study will be undertaken this season by EquiBreed NZ Ltd to evaluate the fertility of semen obtained from the colts at the time of gelding. Every year, a large number of colts are gelded in the Standardbred and Sporthorse industries. At the time of gelding the genetic potential of that horse is lost and consequently the best form of insurance against genetic loss is also lost. Therefore, it is not possible to breed from champion geldings. Frozen semen from that horse is the best way to preserve the genetics of an individual male for an indefinite period. Furthermore, many breeders do not want to train their young colts to collect semen for freezing due to management issues, training or breaking in regimens and they do not want their geldings to have learnt "mating" behavior prior to gelding. If we were able to freeze semen from colts at the time of gelding we could also freeze semen from stallions at the time of death or indeed from endangered species.

After spermatozoa are produced in the testes, they are stored in the epididymis which is attached to the testis. During this storage period the sperm acquire the potential for motility and ultimately fertility. We have previously shown that the fertility of epididymal spermatozoa is lower than ejaculated spermatozoa and further investigation into ways to overcome this lower fertility are required. Studies in the fertility of epididymal spermatozoa will also provide insight into what factors contribute to stallion fertility, the longevity of sperm and our ability to chill or freeze semen.

Fortunately, it is possible to recover and freeze epididymal spermatozoa from the epididymis at the time of gelding for future use. Our previous work has revealed that, on average, it is possible to recover and freeze approximately 30-40 doses of epididymal spermatozoa at the time of gelding a 2yo colt. We also produced the first foal by epididymal sperm in New Zealand in 2007, Emily Rose. Since then we have improved our semen freezing technology and made further modifications to the freezing of epididymal spermatozoa.

This season EquiBreed NZ Ltd will have a post graduate Biology student from the University of Waikato who will be undertaking her Masters degree in the fertility of epididymal spermatozoa. Sperm will be recovered and from the epididymis at the time of gelding and frozen using the latest semen freezing technology. Over the last 9 years Dr Lee Morris has developed a semen diluent to enhance the fertility of epididymal sperm. This diluent will be mixed with the sperm and mares will then be inseminated at EquiBreed NZ Ltd to test the diluent and determine which factors affect the fertility of frozen epididymal spermatozoa.

We are very grateful to the NZERF for their funding and look forward to providing some exciting pregnancy results using epididymal spermatozoa. This technology will allow you to be able to breed from your colts well after they have been gelded.

