

Percentage of Wapiti genes influences pregnancy rates

AgResearch scientist Dr Geoff Asher may have pinpointed a major cause of low pregnancy rates in rising two-year-old New Zealand deer hinds.

The deer industry, concerned about low conception rates in rising two-year-olds because of the impact the resulting low calf numbers have on production, has been investigating different potential causes of the problem.

Dr Asher and his team at AgResearch Invermay are part-way through a major trial monitoring pregnancy rates in this target group of Red deer hinds, which includes thousands of animals across different New Zealand deer farms.

Although there is still a year to go on the trial, results in this DEERResearch-funded project so far point strongly to the amount of Wapiti genes in Red deer hinds as a major factor influencing pregnancy.

He found pregnancy rates varied depending on the degree of Wapiti genes. Rising two-year-old Red deer hybrids with lower percentages of Wapiti tended to scan with a higher conception rate than higher percentage Wapiti genes.

This is likely to be because Wapiti, which is a larger sub-species of deer, mature later than Red deer.

Dr Asher says this confirms what many farmers had already suspected.

Wapiti deer have been used widely across New Zealand deer, and the percentage of




Research showed Wapiti genes influenced pregnancy rates in Red Hinds. Photo: Alan Gates.

Wapiti within herds also varies enormously. These findings are therefore likely to have a big impact on New Zealand deer farms.

“The use of Wapiti in New Zealand provides huge opportunities and benefits, particularly for use as terminal sires. This new information therefore presents us with challenges to make use of Wapiti genes while still managing reproduction to improve on-farm production as effectively as we can.”

Dr Asher’s research over the next year will focus on recommendations to manage on-farm reproduction, including inexpensive ways of identifying and scoring the percentage of Wapiti gene, and adjusting management including nutrition.

The research has been possible only because of the development of DNA technology over recent years, which has allowed AgResearch’s Genomnz lab to accurately identify exact percentages of Wapiti without having to rely on traditional record-keeping. 

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Craig’s business is nearly doubling each year as farmers cotton on to the advantages of scanning. “The best possible advertising is word of mouth. I do a farm in an area, and within a week others from the same area are ringing me up asking me to come and do their herd,” he says.

Scanning is important to support welfare best practice. The proposed Deer Welfare Code, in its current form, includes a section covering the transport of pregnant hinds.

However, Deer Industry New Zealand’s Quality Manager, John Tacon says the draft code stipulates a cut-off date of 1 October for the transport of pregnant hinds.

“By that stage most farmers should know which hinds are in calf, but where there is any doubt, scanning in September could be a useful management tool.

“Transportation can be very stressful for any animal but is particularly stressful for pregnant hinds. It can often result in calves being lost and, on rare occasions, in the death of the hinds,” he says.

The restriction on transportation of pregnant hinds in the welfare code is a way of achieving best practice standards, and is intended to meet the welfare concerns of international consumers, John adds. “It also benefits deer farmers by preventing the unnecessary loss of calves or productive hinds.”

John says calving on most deer farms normally starts in early to mid November, but with some breeds and in some regions it can continue for several months. “The recommended cut-off date of 1 October got general acceptance right across the industry during our consultations on the draft code,” he says.

The draft Deer Welfare Code, the first ever for the deer industry, will be presented to the National Animal Welfare Advisory Committee (NAWAC) in the near future. NAWAC will formalise the document and send it out for public submissions. Once that process is completed and any amendments made, the Code will be given to the Minister of Agriculture for approval and passage into law. 