

## Scanning a valuable tool, but use a reputable operator

**Modern scanning equipment and more knowledgeable operators mean that hind pregnancy scanning can now be extremely accurate, according to Geoff Asher, AgResearch's unit leader, Deer Systems Group.**

He recalls the many horror stories in the 1980s of hinds scanned empty being sent to the works and turning out to be many months pregnant at slaughter.

Thankfully, these incidents are increasingly rare. By using experienced and competent scanning operators and the right scanning equipment at the right stage in pregnancy, Geoff says scanning results can now be 98-99 percent accurate.

While it has not done specific research into scanning accuracy, Geoff says AgResearch has done a range of projects that have given good insights into scanning. He says there are strengths and weaknesses in both of the scanning systems used in New Zealand – internal (rectal) and external scanning. If deer farmers are aware of these limitations and use reputable scanning operators, they should achieve those results every time – or better!

Rectal scanners have been around for many years, and Geoff says they are generally accurate if used between 30 to 80 days of pregnancy. After that stage the foetus drops out of scanning range.

“Ideally, they should be used from mid May to late June, or else the hinds are likely to scan empty when they are not,” he cautions.

External scanning gives results that are just as accurate, particularly from 80 days through to later pregnancy when physical indications confirm pregnancy although not necessarily when calving will take place.

Pregnancy scanning is a powerful management tool, Geoff says. Early scanning can inform culling decisions before winter sets in, and helps with planning for fawning. Hinds can be grouped by fawning date, and different feeding requirements planned for.

For the best results it is important to use a reputable operator, Geoff warns. He has a major concern that there is no regulatory body that licenses scanning operators or sets standards. “Having said that, most operators I’m aware of are very good.”

### Early culling gives time to replace hinds

Accurate and early pregnancy scanning can help farmers maximise their investment in stock and feed, and is being used increasingly by deer farmers around the country as an important management tool, according to scanning operator Craig Feaver.

Craig has been working around deer for nearly 20 years and since the mid 1990s has been a scanning operator, now with his own business. Covering Otago, Canterbury and the West Coast, he is finding demand for his services increasing as farmers realise the contribution scanning can make to the profitability of their enterprise.

One major benefit of scanning, he says, is that dry hinds can be identified quickly and dispatched to the works.

“Deer are normally very fertile animals, and under the right food or welfare conditions, become pregnant very easily. On average, there will be six to eight dry hinds among every 100 scanned,” Craig says.

“In some cases, due to drought or food pressures or an infertile or lazy stag, it could be up to 15 percent or more, resulting in a major loss in potential income. Scanning is also an excellent way to detect how well stags are working.”

In recent years, Craig has identified three stags which were totally infertile, resulting in whole herds being dry.

In a typical herd, with eight out of 100 hinds being dry, selling those eight should return enough to buy five replacements which would then have five fawns, resulting in 10 animals instead of eight. Sound economics and good management, he says.

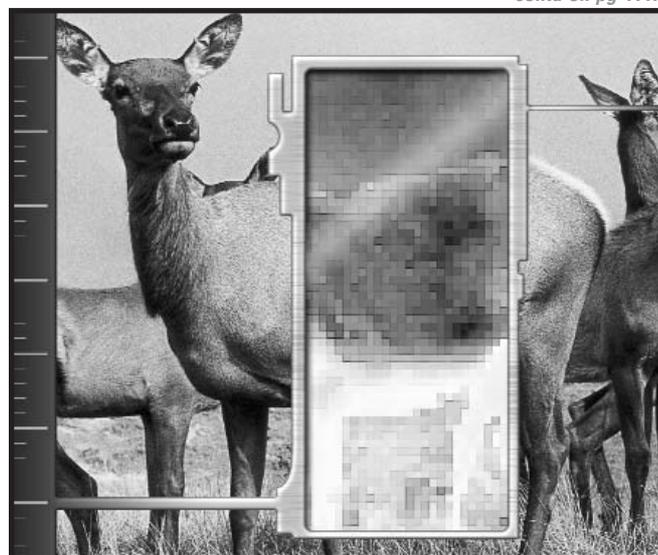
Craig uses modern ultra-scanning gear that is extremely portable and easy to operate. The small screen (about 35 cm), an external probe about the size of a packet of cigarettes, and a small power source and cable, all fit into a small suitcase. With his assistant, he is able to scan around 200 hinds in an hour, walking quietly around an open pen without stressing or frightening them, with no physical restraint necessary except possibly for large adult elk.

External scanning systems have been available for a number of years now. Previously, the only option had been rectal scanning, which is not so accurate later in the pregnancy.

The external probe is placed on the udder or nipple and scans up into the uterus, showing the whole of the pregnancy. It can detect a pregnancy at 30 days from conception, when the foetus is the size of pea. From this he can estimate the date of conception and therefore fawning date.

However, Craig notes that predicting the birth date can be a bit of a gamble as some breeds can delay births for up to 15 days if, for instance, the weather is particularly bad – or they can deliver early if conditions are particularly good.

*contd on pg 17...*



# 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. 

**For further information:**

**Dr Geoff Asher, AgResearch Invermay, phone 03 489 9048.**

**Email [geoff.asher@agresearch.co.nz](mailto:geoff.asher@agresearch.co.nz)**

...contd from pg 16

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. 