

## New Zealand Society of Animal Production online archive

This paper is from the New Zealand Society for Animal Production online archive. NZSAP holds a regular annual conference in June or July each year for the presentation of technical and applied topics in animal production. NZSAP plays an important role as a forum fostering research in all areas of animal production including production systems, nutrition, meat science, animal welfare, wool science, animal breeding and genetics.

An invitation is extended to all those involved in the field of animal production to apply for membership of the New Zealand Society of Animal Production at our website [www.nzsap.org.nz](http://www.nzsap.org.nz)

[View All Proceedings](#)

[Next Conference](#)

[Join NZSAP](#)

The New Zealand Society of Animal Production in publishing the conference proceedings is engaged in disseminating information, not rendering professional advice or services. The views expressed herein do not necessarily represent the views of the New Zealand Society of Animal Production and the New Zealand Society of Animal Production expressly disclaims any form of liability with respect to anything done or omitted to be done in reliance upon the contents of these proceedings.

This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](http://creativecommons.org/licenses/by-nc-nd/4.0/).



You are free to:

**Share**— copy and redistribute the material in any medium or format

Under the following terms:

**Attribution** — You must give [appropriate credit](#), provide a link to the license, and [indicate if changes were made](#). You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

**NonCommercial** — You may not use the material for [commercial purposes](#).

**NoDerivatives** — If you [remix, transform, or build upon](#) the material, you may not distribute the modified material.

<http://creativecommons.org.nz/licences/licences-explained/>

## Ultrasonic pregnancy scanning – a tool for change

A.B. MCCORKINDALE

Agriculture New Zealand, P.O. Box 148, Balclutha, New Zealand

### ABSTRACT

The advent of ultrasonic pregnancy scanning has provided new opportunities for the management of breeding ewes. Major benefits of scanning are better allocation of feed resources and improved management at lambing, as well as being a tool to improve the genetic merit of flocks. Scanning results are also the catalyst for farmers focusing more clearly on their flocks' relative reproductive performances either informally through comparing scanning percentages and fertility indices with neighbours, or formally through comprehensive farm monitoring reports.

**Keywords:** Sheep; triplets; pregnancy scanning; flock management.

### INTRODUCTION

Without doubt, ultrasonic pregnancy scanning and its widespread adoption has been one of the most significant technological advancements to affect sheep farming. As farmers and their advisors develop more experience with it, they continue to come up with new ways to extract value from the scanning information.

Initially, scanning was promoted for its use in identifying and allowing early sales of dry ewes and identifying late ewes. It was quickly realised that the major gain from scanning was from spending a little more to get single- and multiple-bearing ewes separated and managed separately.

### COMPARISONS BETWEEN FLOCKS

Once some farmers started comparing their scanning results in discussion groups and in general over-the-fence conversations, the value and effect of good fertility genetics became very evident. The next step was the bringing together of the scanning result and the ewe bodyweight at mating. Dividing the scanning percentage by the mating weight provided a simple, but effective, index of fertility. For example, ewes with a mating weight of 60 kg and a scanning percentage of 150% have a flock index of 2.5. The index values typically range from 2.2 – 2.8, with a few exceptional flocks achieving levels above this range.

Scanning has been a key ingredient in the FT2000 farm monitoring programme and the presentation back to the farmer of his information once it has been through this system has greatly improved the potential use of the information from a larger group of farmers.

### FEED MANAGEMENT

Most farmers have reported increased lambing percentages since they have started scanning. I believe one of the key reasons for this rise has been the differential feeding of twins and singles with the result that the bodyweight of the twin-bearing ewes has been much improved at weaning and therefore maximises her chance of having twins

again in the next year. In mobs of mixed twins and singles, especially in years when spring pasture growth has been slow, the bodyweights of twin-rearing ewes often suffers through lactation. While this bodyweight could be recovered after weaning in a good year, if feed conditions were not ideal many did not catch up and subsequently had a single lamb.

When to separate twin from single ewes has been a subject of some debate. There is no hard and fast answer to this except that, in general terms, if feed is short then the sooner they are separated the better so that differential feeding of twins can get started. However, there is little significant difference in feed requirement until 3-4 weeks pre-lambing. Therefore, if feed supply is adequate, it is a lot simpler to manage as few mobs as possible and feed all sheep at maintenance. This has meant that separation in a good year can be delayed until the pre-lamb vaccinations.

Over the first couple of years of scanning, many farmers went a bit too far in restricting the feeding of single-bearing ewes and lightly stocking the twin-bearing ewes. The result of this was more even lambs at weaning but there was a reduction in the numbers of big single lambs available for early drafting. I believe most farmers are now achieving a good balance between feeding levels for single-bearers and twin-bearers. Lambing problems in single-bearing ewes seem to have been reduced significantly since they have been separated and stocked more heavily. An effective rule of thumb has been to increase the stocking rate by 10% for singles, and reduce it by 10% for twins, relative to the stocking rate used for the paddock by combined single-bearers and twin-bearers prior to scanning. This rule of thumb needs to vary a little depending on the scanning percentage.

### TRIPLET-BEARING EWES

Over the last two years more of the experienced scanning operators are identifying and marking triplets as part of their service without slowing down or charging more than the twin/single rate. This creates some opportunities

to learn to maximise production from the triplet ewes. The fact that triplets are identified in some flocks at scanning, but not in others, means that caution must be exercised when comparing flocks scanning above 170%. Some of these will have had many triplets accounted for and others will have had their triplets recorded as twins, thus a scanning percentage of 170% in one flock and 180% in another may actually represent the same lamb drop.

New equipment enabling a better view inside the animal and more farmers wanting to identify their triplets will see triplet identification increase.

Local experience has certainly shown that while there are some issues in lambing triplets separately, the fact is that they have gone through the tailing yards at 220-230% compared to twins at 165-185%. The main issues seem to be bearings and mismothering. The use of temporary subdivision and having a range of lambing dates in the same paddock may help to restrict mismothering, but a proven way of eliminating bearings is certainly needed.

While some intensive smaller properties are operating systems where triplets are reduced to twins and the extra lamb is mothered on to ewes having a single, this practice is not widely used. For many farms, especially the larger properties, the attitude seems to be one of "if a sheep is going to have triplets then she needs to be able to rear all three to a decent weaning weight – if not, the ewe lambs may not be kept." For this to happen, the triplet-rearing ewe needs to have every chance to raise her lambs and therefore must have access to enough feed. This can mean a stocking rate lower than the twin-rearing ewes or giving the triplet-rearing ewes priority access to young grass or hybrid ryegrass paddocks.

## MANAGEMENT OF HOGGETS

Pregnancy scanning also has benefits for the management of pregnant hoggets. As with the ewes, many farmers at first used scanning of hoggets to divide only into wets and dries. However, they quickly realised that scanning hoggets for twins and singles had the same benefits as scanning their ewes. There were also other benefits.

Most lambing difficulties in hoggets are from those having singles. The twin bearing hoggets seem to be able to be fed ad-lib with few problems but the singles need to be kept very tight over late pregnancy to reduce lambing problems. Some farmers are now also developing special blocks on their farms with very small paddocks and extra shelter for lambing hoggets and improving lamb survival, as well as making them easier to catch when necessary. This facilitates management involving regular shedding off.

## LAMB SURVIVAL

Lamb survival, or the percentage of lambs lost from those identified by scanning ( $\text{scanning \%} - \text{lambing \%} / \text{scanning \%} \times 100$ ), has also become a measure for comparison and discussion. There seem to be significant differences within our major breeds for rates of lamb survival. It would be interesting to be able to track this back to individual rams and then back through the ram breeder's records.

## THE FUTURE

New technology and techniques are still needed that will contribute to the further use of scanning information. These include electronic tags that can store data and a way of easily identifying ewes which give birth to twins, but repeatedly only rear one lamb.