#### Sustainable Sheep Systems:

# **Benefits of Pregnancy Scanning and**

## **Recording Individual Ewe Scan Data**

## **Benefits of Pregnancy Scanning**

Pregnancy scanning of ewes, 80 days post ram turn out, identifies with high accuracy those ewes not in lamb 'barren' and for those in lamb, the number of lambs carried. A good marking system is essential, use coloured spray paints to identify single, twin, triplet and barren ewes.

Pregnancy scanning is a highly cost effective management tool. Benefits include:

- Identification of barren ewes for culling and sale when prices are generally high.
- Ewes can be grouped and fed according to litter sized carried. Benefiting both productivity (optimal nutrition), lambing ease (avoid over feeding singles) and cost of production (only fed to requirements).
- Ewes can be grouped by litter size in the lambing shed for improved labour efficiency eg triplets near singles.
- Ewes can be grouped by litter size in outdoor lambing systems with multiples given priority of the best fields and run at a lower stocking rate to improve performance and lamb survival.
- Ability to benchmark and reflect on how management over the course of the last year has influenced scanning performance. This can be used to influence future management and breeding decisions for example was grazing management from weaning to tupping effective in building ewe condition? have certain genetics performed better? Have below target weight gimmers led to a poor scan?
- Scanning ewes by management groups (eg hill or in-bye or different feeding) and breed (separating breeds and different crossbreds) provides much greater clarity, as does scanning hoggs and gimmers separate to mature ewes.



High prolificacy flock bred through selection for twinning

Photo credit: Daniel Stout

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#### Grouping ewes on lambing date

Management and nutrition post scanning can also be further improved by grouping ewes on body condition score (increase allocation to thins) and by lambing date (separate early and late lambers for delayed feeding).

Scanners can provide an estimate of lambing date, typically early (1<sup>st</sup> 10 days), middle (2<sup>nd</sup> 10 days) or late lambing (post 20 days). This information can also be acquired through use of ram paint or raddles at tupping

Delayed concentrate feeding of late lambers (post 10 days, 50% of ewes) can lead to a £1,200 saving for 1000 ewe flock scanning 200% with concentrates at £380/t (FAS TN748 Strategic Silage Production for Sheep Systems)

#### Benefits of recording individual ewe scan data

Recording pregnancy scan results of individual ewes, be that manually or using EID, provides the opportunity for further improvements in management and breeding decisions through having multiple years of scan information for each ewe. This allows you to identify:

- Ewes that have repeatedly scanned singles for culling or demotion to a terminal sire.
- Ewes and family lines with the best twinning rates to breed maternally to improve flock prolificacy.
- Ewes and family lines that have high triplet rates. Use this to influence breeding decisions, be that selection for or against depending on whether triplets suit the system.
- Where a two strike policy for barren or scanning singles is adopted, EID recording provides an alternative identification option to ear or large tag notching that is easier to read in the race. EID recording can ease labour requirements further through the use of auto-shedding equipment for rapid grouping of ewes.
- If ewe sire is recorded, then data can be analysed by sire group to identify tups with superior daughter fertility and prolificacy.

Whilst fully performance recorded flocks will have records on fertility/prolificacy from birth records, for commercial flocks to gain these benefits simply recording individual scan data is much simpler and less time consuming than recording during the busy lambing period.



*Ewes grouped by litter size carried for targeted feeding at SRUC Barony* Photo credit: SRUC

## **EID Recording of Pregnancy Scan Data**

Data can be recorded on paper, but this is time consuming and difficult to analyse.

EID recording meanwhile provides the opportunity to rapidly record scan information to the individual ewe's tag number and to then have this information available in an easily accessible format for viewing and analysing historic data at a later date.

It is important to note, however, that the speed of recording must be fast enough to keep up with the scanner. Making the scanner wait is not an option and with scanners looking to scan 200+ ewes per hour (up to 500 ewes/hours for low prolificacy hill systems) recording must be rapid. Colour spray marking is still recommended for management purposes (for example to spot ewes that jump into another group).

Often technology is not fast enough for the task. However, certain, well set up, handheld data loggers, psion handheld data recorders, newer stick readers with data logging capacity and advanced weigh-heads can be suitable. For weigh-heads there is also the option to further streamline the task with automated EID reading through a panel reader on the weigh crate.

Alternatively, ewes can be spray marked at scanning and then run through the race again for recording.

EID recording combined with auto-drafting equipment provides the opportunity for vastly reduced labour requirements to sort ewes into management group for example separating ewes by litter size carried for differential feeding or shedding off barren ewes for sale.



Top L: Psion data recorder. Bottom L: Data logger. R: Advanced weigh-head w/ auto-draft.

## Case study: SRUC Kirkton & Auchtertyre

Individual ewe pregnancy scan data is recorded each year for all ewes at the hill and upland unit with the information used for improved feeding and breeding selection.

Previously, pregnancy scan data was recorded at the point of scanning using an Agrident data logger. To streamline the process all other traits were removed so that the process was simply to scan the ewes tag and type in a single number (0, 1, 2, 3) for litter size carried. Then on to scan the next ewe.

Pregnancy scan data was then downloaded off the data logger onto a laptop where it was added to farm management software, where full pedigree and lifetime information is stored on each ewe, and uploaded to the Tru-Test XR5000 weigh head.

This weigh head is capable of storing vast amount of individual ewe lifetime data. This means that the full scanning history of any ewe can be viewed in real time when she is in the crate facilitating improved culling and breeding decisions.

They have now opted to input scan data directly into the Tru-Test XR5000 weigh head. Ewes are spray marked at scanning and then run back through for recording. When the ewe enters the weigh crate her tag is automatically read by the in-built panel reader and her weight is automatically recorded into the weigh head. At that point scan information (0, 1, 2, 3) can be manually typed into the Tru-Test.

Previously ewes would be manually drafted into litter size groups for targeted late pregnancy feeding and into lambing groups. This was time consuming.

Now with the Tru-test connected up to a Prattley 5-way auto-drafter, on exit from the weigh crate ewes are automatically shed into litter size groups (as defined in the scanning options set up). When data is being input manually, eg scan data or body condition score, then ewes can be rapidly recorded and drafted at 200 ewes/ hour. Whilst when set on automatic weigh and draft (without any manual input of data) ewes can be drafted into groups at up to 500 ewes/hour.



In-lamb Scottish Blackface ewes at SRUC Kirkton & Auchtertyre Farm

Photo credit: SRUC

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For more information on the EID and data recording technology available watch:

FAS Technology for Improved Animal Welfare - EID Video



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