

# Strategic use of body condition scoring (BCS) to improve performance in commercial sheep flocks

N Wright<sup>1,3</sup>, L Stubbings<sup>2</sup>, E Genever<sup>1</sup>, NR Kendall<sup>3</sup> and KD Sinclair<sup>3</sup>

AHDB Beef & Lamb<sup>1</sup>, LSSC Ltd<sup>2</sup> and The University of Nottingham<sup>3</sup>

## Introduction

- Body condition score (BCS) is a management tool used to assess ewe fat reserves
- Five-point scale: 1 = very lean, 5 = very fat
- BCS reflects the nutritional and health status of a ewe

## Objectives

- To determine the long term impact of ewe BCS on flock productivity
  - Defined as weight of weaned lambs
- Identify critical periods of annual production cycle
- To investigate the potential for weight change in individual ewes as a proxy for BCS

## Methodology

- Four year project based in England
- Three commercial farms (total ~3,000 ewes)
- Data gathered 2013 - 2016
- Ewes are identified via EID
- Lambs tagged with EID at birth
  - Linked to their dam
- Ewe BCS and live weight data collected at:
  - Weaning
  - Mating
  - Scanning
  - Lambing
  - 8 weeks post lambing



Image 1: Lamb with EID eartag

- Lamb weight data collected at:
  - Birth
  - 8 weeks post lambing
  - Weaning (at 12 weeks)
- Data is collected via EID reader, stored in a software programme and extracted for analysis

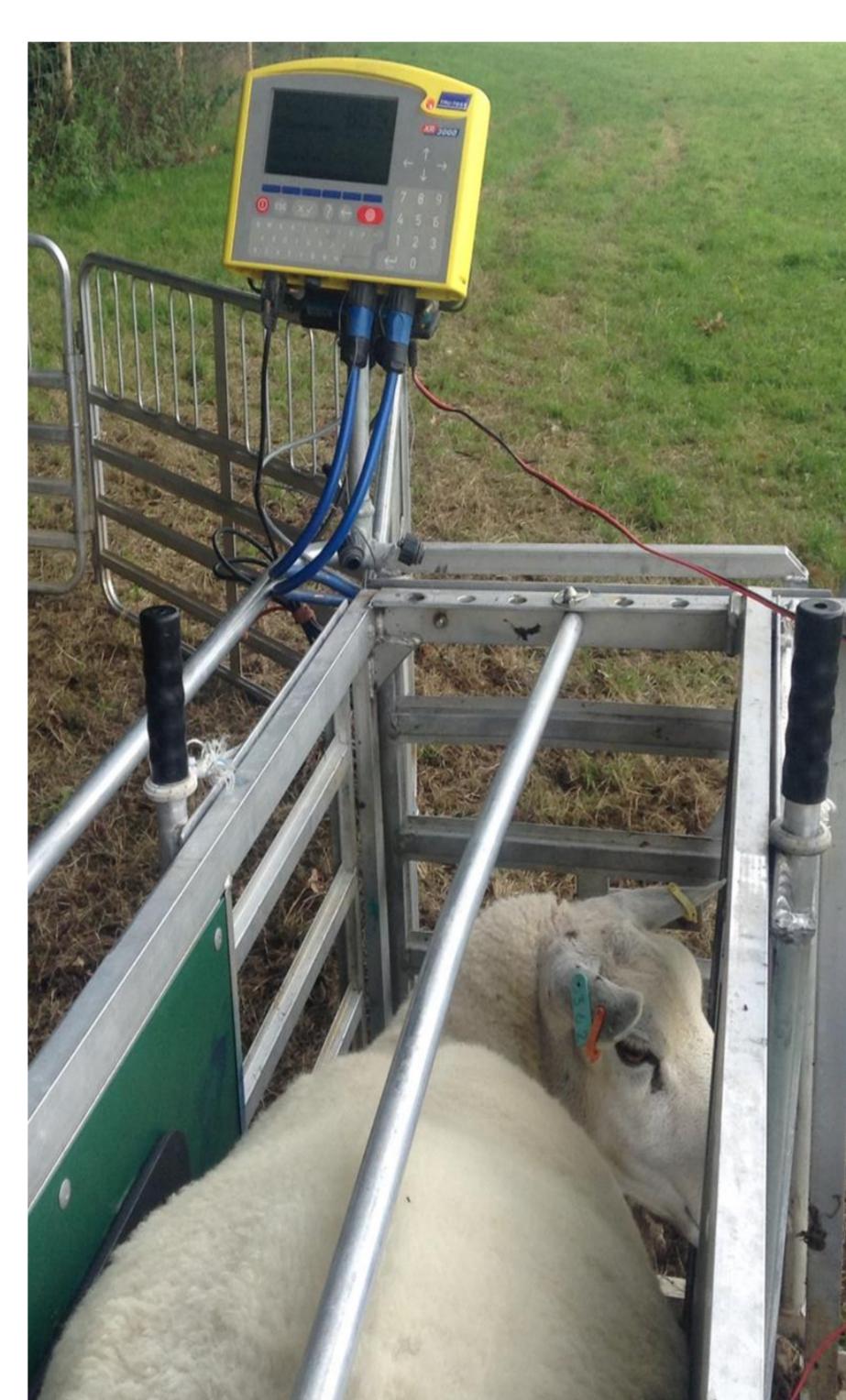


Image 2: Ewe weight recorded using EID equipment

## Results to date

- BCS profile of two of the project farms has improved over the first three years (see Figure 1)
- Reduced variation and more ewes hitting target BCS at mating

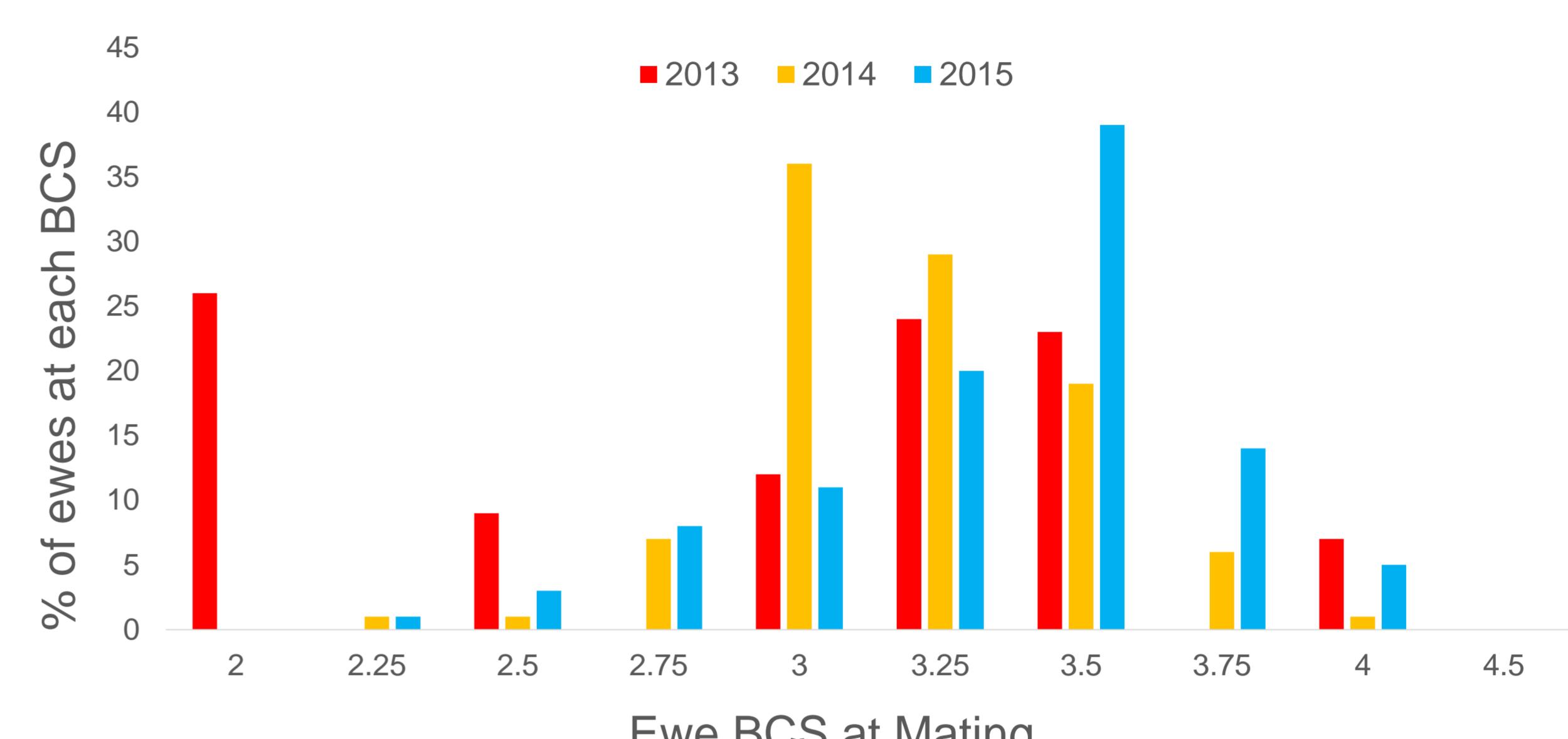


Figure 1: Flock BCS profile for one of the farms at mating over first 3 years

- Clear indications that the change in BCS affects performance (litter size and lamb weight); particularly from weaning to scanning
- Early findings indicate that weaning weights are affected by ewe BCS and weight at mating
- Eight-week weight of lambs is emerging as a key performance indicator (KPI)
- Light lambs (<17 kg) at eight weeks remain lighter through to weaning and beyond
- The percentage of light lambs reduces as BCS improves
- As BCS improves, average lamb weight and percentage of lambs greater than 20 kg also improved at eight weeks (see Table 1)

Table 1: Lamb performance at 8 weeks in 2014 and 2015

	2014	2015
Average eight week weight (kg)	19.6	21.6
Percentage of lambs greater than 20 kg at eight weeks (%)	42	64
Percentage of lambs less than 17 kg at eight weeks (%)	23	18

## Further Work

- Continued analysis of the long term impact of ewe BCS and liveweight for the 2016 lambing season
- Understanding the performance of shearling ewes in a flock
- Investigate the reasons for light lambs at eight weeks
- Cost:benefit analyses of management interventions for light lambs