

69th Annual Meeting of the European Federation of Animal Science Dubrovnik,
Croatia, 27th to 31st August 2018

Investigating factors affecting lifetime performance in ewes on a network of commercial farms

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Who is Agriculture and Horticulture Development Board?

- Statutory levy board, funded by farmers, growers and others in the supply chain and managed as an independent organisation (independent of both commercial industry and of Government)

Our purpose is *to inspire our farmers, growers and industry to succeed in a rapidly changing world*

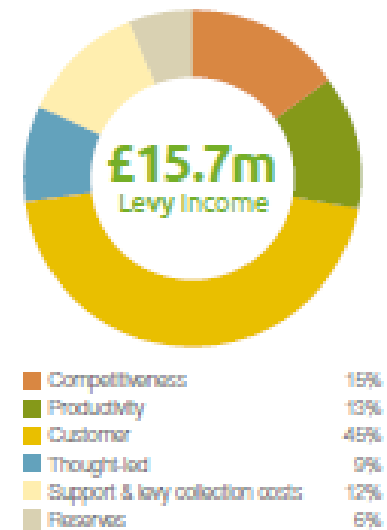
Our vision is for *a world-class food and farming industry inspired by, and competing with the best*

Beef & Lamb

- Collect levy from English farmers and processors

£ per head	Slaughterer/Exporter	Producer	Total
Cattle	£1.35	£4.05	£5.40
Calves	£0.08	£0.08	£0.16
Sheep	£0.20	£0.60	£0.80

Expenditure of levy income 2017/2018:



What is Challenge Sheep?

- Seven year project running from 2017 to 2024
- Monitoring 9,500 replacement ewes for their productive lifespans
- Collecting large amount of EID data at key times of year



Data collection

<p>Tupping</p>	<p>List of replacements Ewe breed BCS Weight Tupping date Deaths/cull reasons</p>
<p>Scanning</p>	<p>BCS Weight Scanning number Scanning date Deaths/cull reasons</p>
<p>Lambing</p>	<p>BCS Litter size Lamb linked to ewe Lamb birth weight Lamb sex Deaths/cull reasons</p>

<p>Eight weeks</p>	<p>BCS Weights Lamb weights Deaths/cull reasons</p>
<p>Weaning (90 days)</p>	<p>BCS Weights Lamb weights Weaning date Deaths/cull reasons</p>

Year 1 = 78,000+ data points

Year 2 = 234,000+ data points

Project farms

Challenge Sheep farm locations

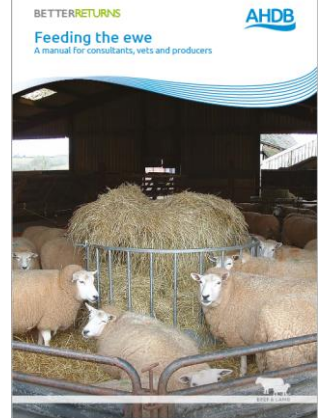
1. Phill Pearce, Devon
2. Gareth Beynon, Dorset
3. Robert and Anna Hawke, Wiltshire
4. Matthew Bluth, West Sussex
5. Robert Hodgkins, Hertfordshire
6. Gareth Owen, Leicestershire
7. Jake Frestone, Gloucestershire
8. Sam Jones, Worcestershire
9. Tony Offland, Harper Adams, Shropshire
10. Peter Webster, Cumbria
11. Ian Wilson, North Yorkshire
12. James Drummond, Northumberland



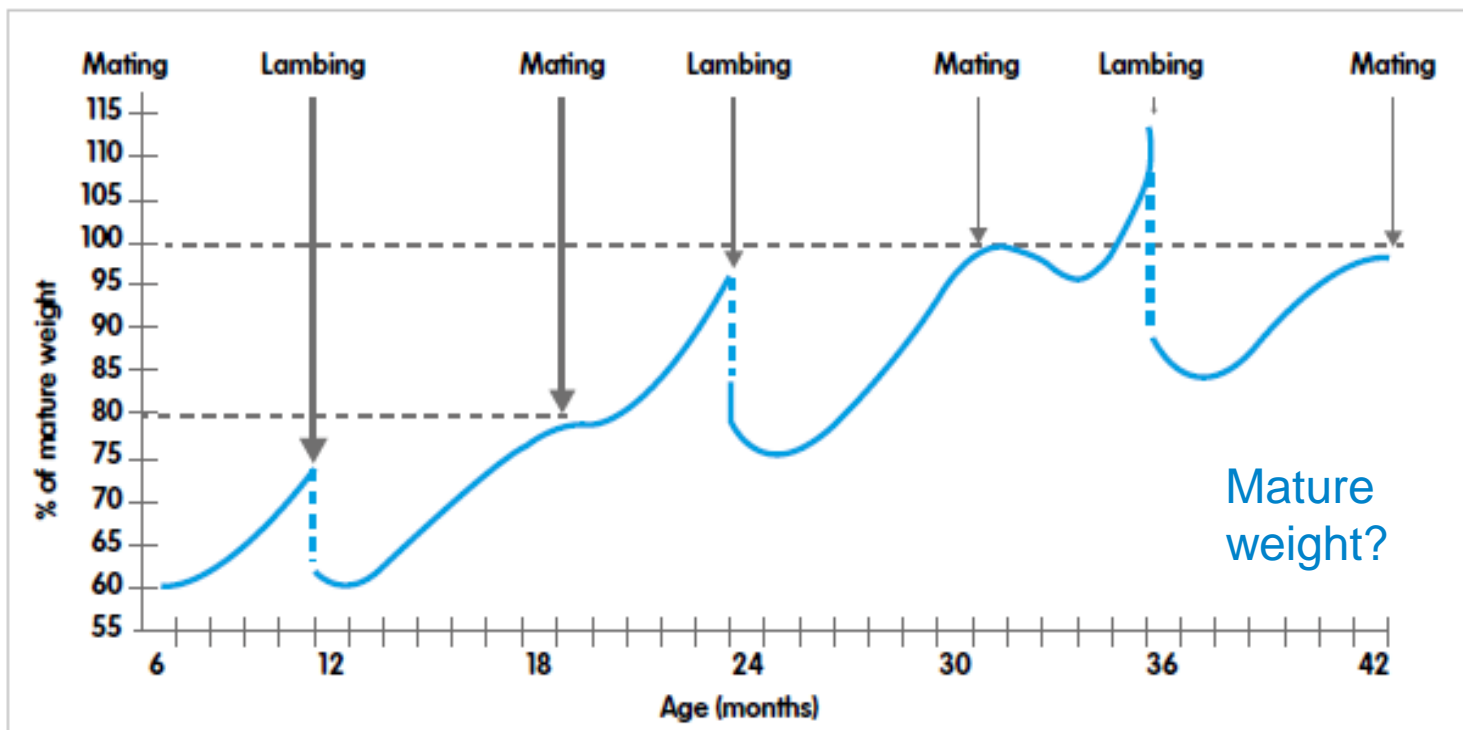
What do we aim to achieve?

- To understand how management during first breeding impacts lifetime performance
- To understand how improved management can reduce replacement costs





Targets for ewe lambs



Weight and BCS targets

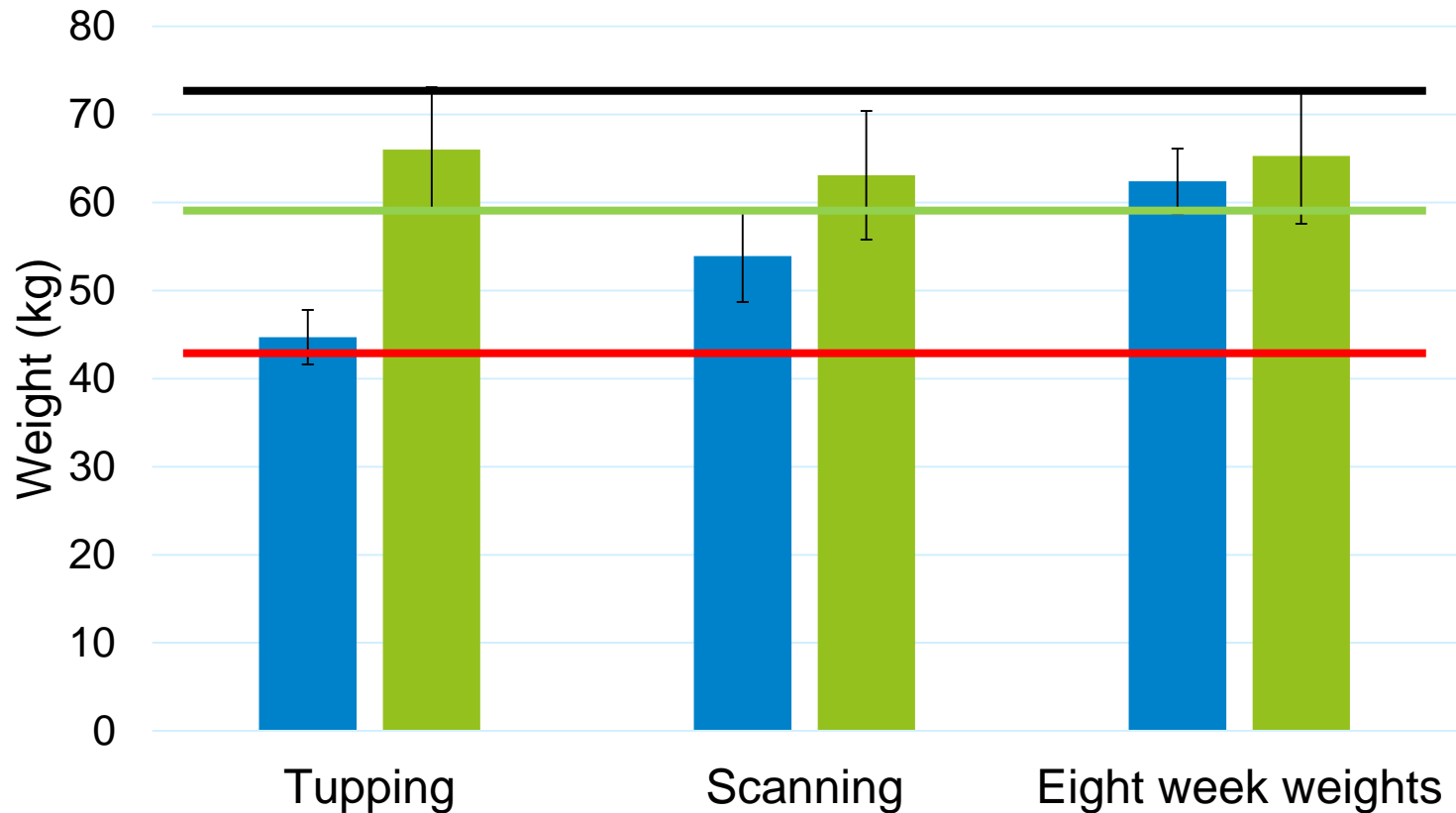
Ewe type	Ewe lambs (mature weight 70kg)	Lowland shearlings (mature weight 70kg)	Hill shearlings (mature weight 50kg)
Minimum weight at mating (kg)	42 (60% of mature weight)	56 (80% of mature weight)	40 (80% of mature weight)
Target weight at lambing (kg)	56 (80% of mature weight)	63 (90% of mature weight)	45 (90% of mature weight)
Target BCS at lambing	3.0	3.0–3.5	2.5

Why focus on replacements?

- Sheep KPI project:
 - Young ewes in the flock are responsible for around 40% of light lambs (<17 kg at eight weeks)
 - Shearlings gradually gaining weight scan better than those gaining rapidly followed by store or loss



Example from one farm with both ewe lambs and shearlings - weight



■ Ewe lambs ■ Shearlings

Black line = 65 kg

Mature weight

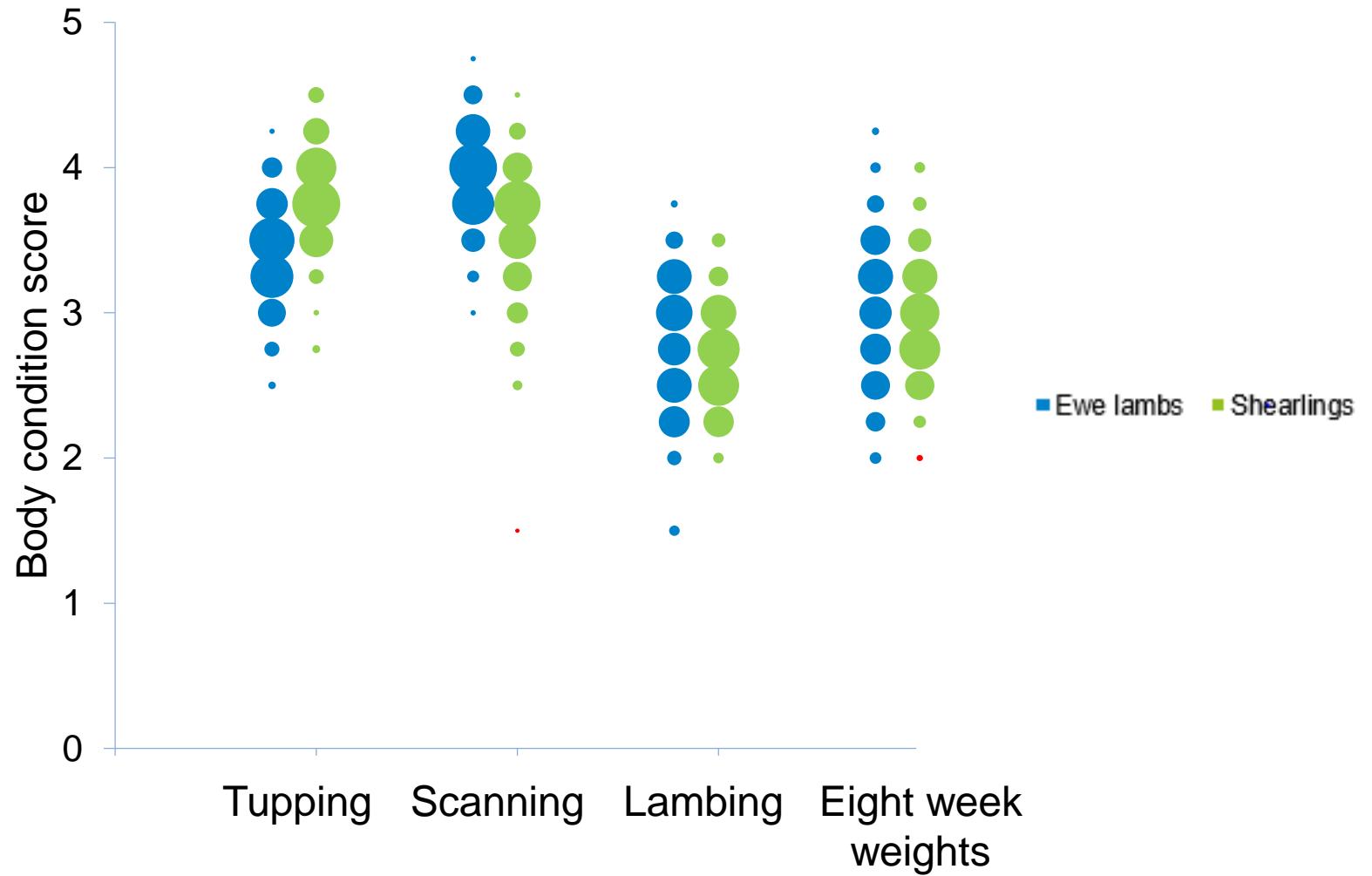
Green line = 52 kg

80% mature weight

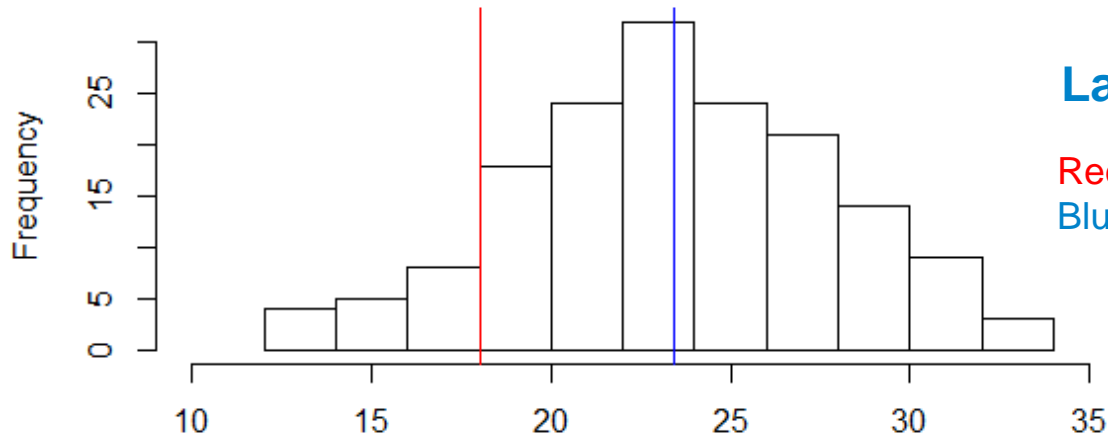
Red line = 39 kg

60% mature weight

Example – body condition score

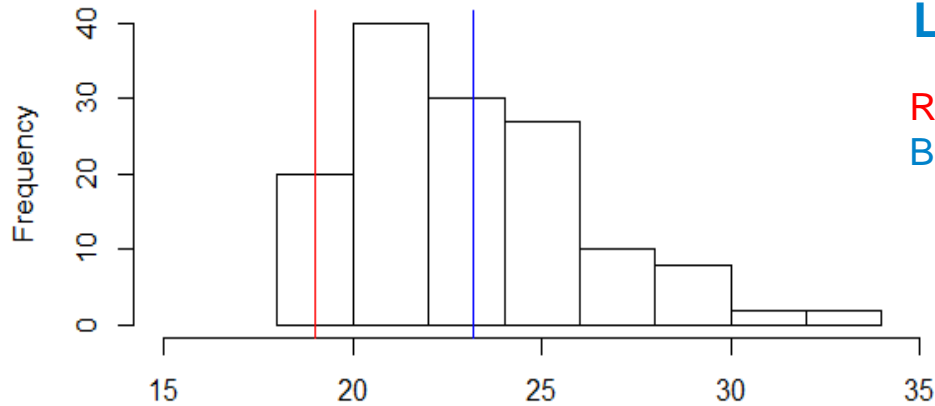


Example – eight week weight



Lambs from ewe lambs

Red line = 18 kg 8WW target
 Blue line = 23.4 kg Average

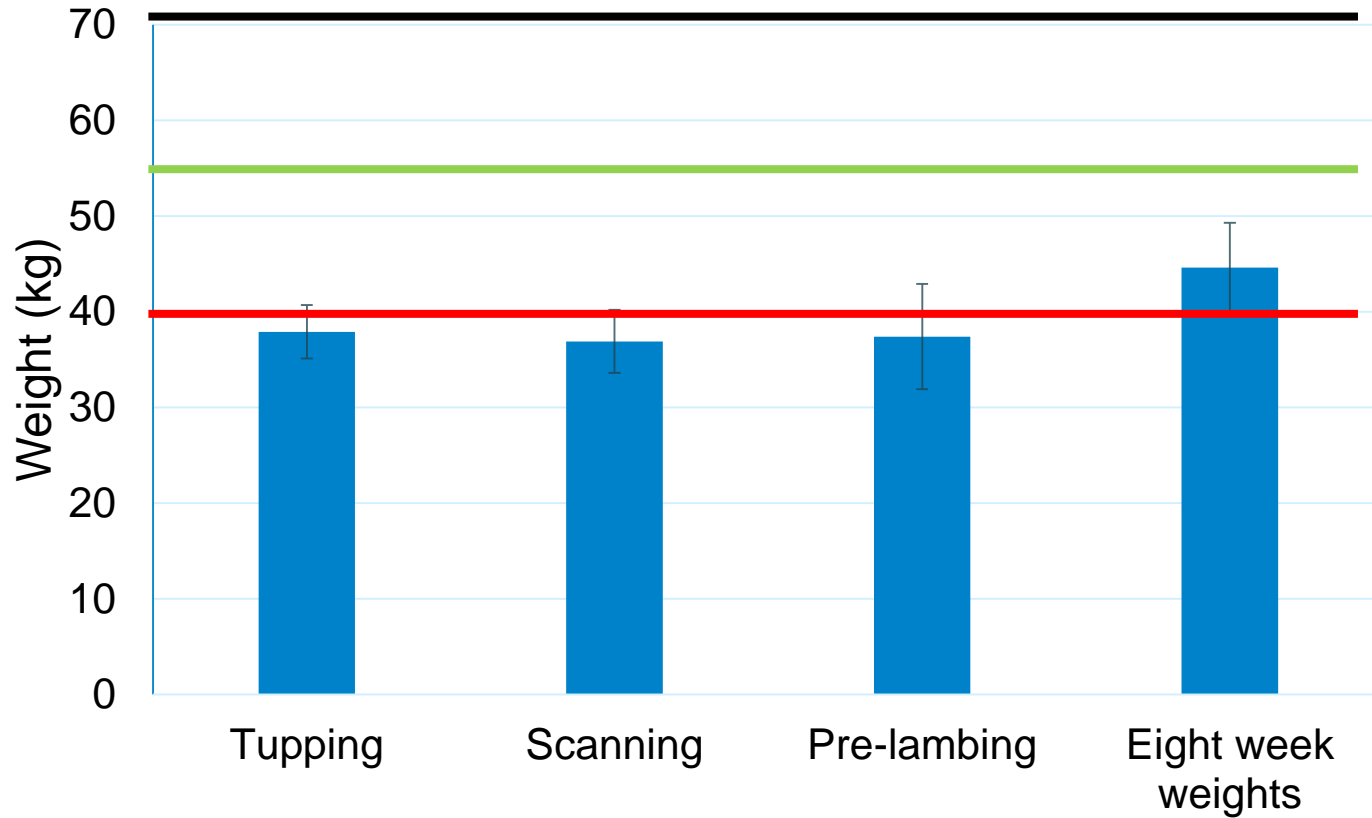


Lambs from shearlings

Red line = 19 kg 8WW target
 Blue line = 23.2 kg Average

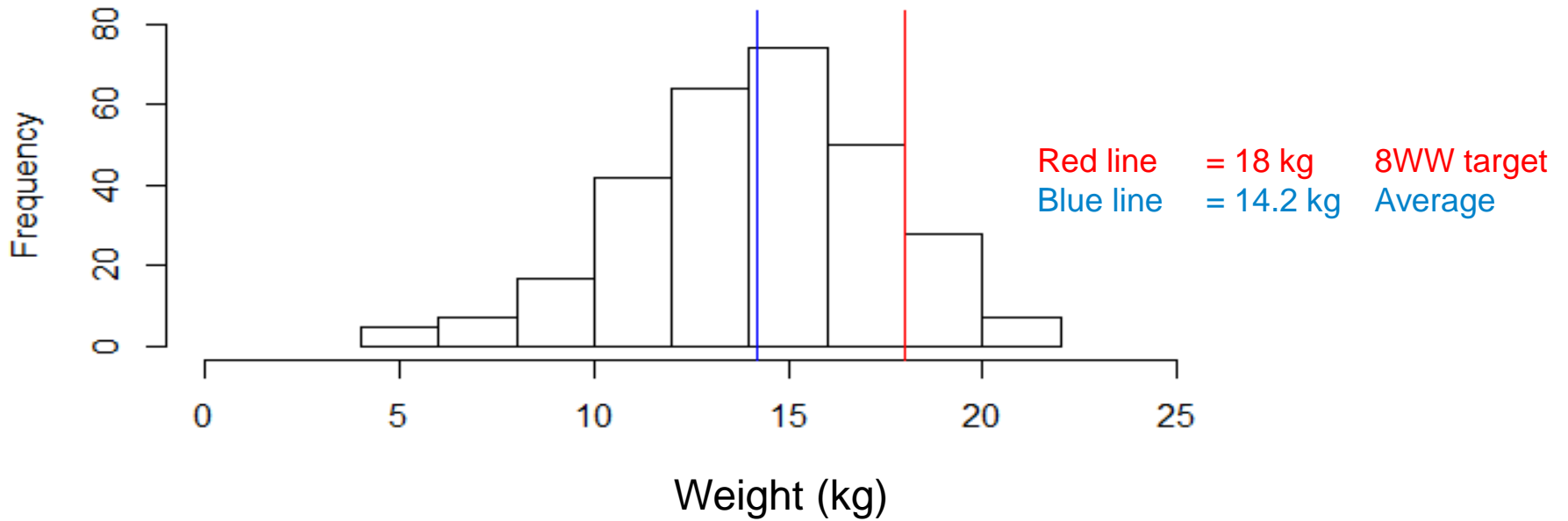
Weight (kg)

Different farm example – ewe lambs



Black line = 65 kg	Mature weight
Green line = 56 kg	80% mature weight
Red line = 42 kg	60% mature weight

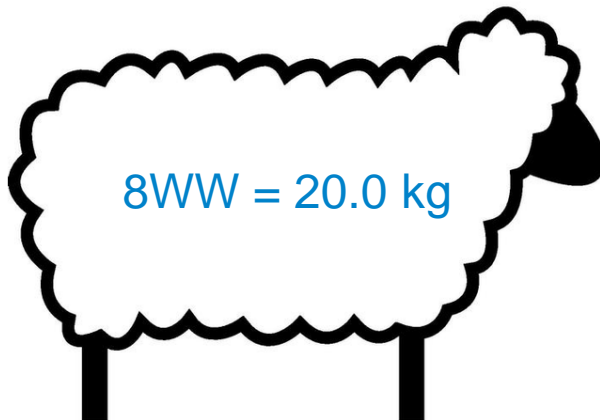
Different farm example – ewe lambs



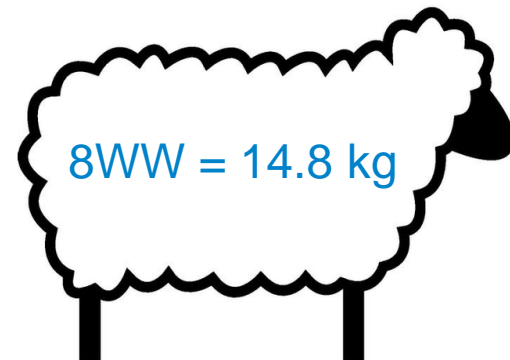
What is the consequence?

- Early analysis for in-lamb ewe lambs at or below weight target at tuppings on total eight week weight reared

At target

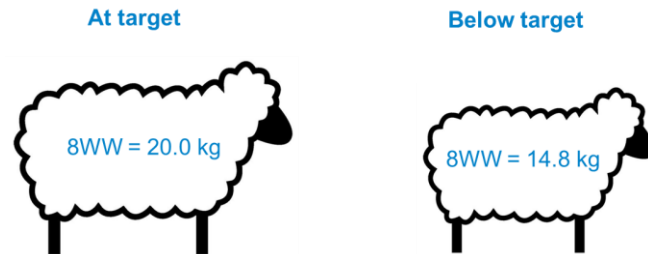


Below target



**5.2 kg difference
@ £2 per kg LW
= £10.40**

What are the interventions?



- From this example, justify interventions costing around £10 and still break-even
 - Selection of home-bred replacements from eight week weights of age and preferential grazing to get to weight targets
 - Supplementary feeding from weaning to get to targets
 - Weight targets for bought-in ewe lambs
 - Choose not to tup underweight ewe lambs and run them around

Future focus

- What is the consequence of “poor management” and what can be justified in terms of interventions?



- What does body condition score tells us that liveweight doesn't and vice versa?



Any questions?



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<http://beefandlamb.ahdb.org.uk/returns/project-farms/challenge-sheep/>

A vibrant landscape of a green field at sunset. The sun is low on the horizon, casting a warm glow over the scene. The sky is filled with colorful clouds, and the field is lush and green. A path leads from the foreground towards the horizon. The overall mood is peaceful and inspiring.

**‘Inspiring our farmers, growers
and industry to succeed in a
rapidly changing world’**

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