

Flock notebook



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Why collect data?

Do you know how your animals are performing and your costs of production? Collecting records and then analysing them is the best way to understand how your business is performing.

Once you know what your business has been achieving, it is easier to set goals. When setting goals, involve others who work in the business. This means that everyone feels part of the decision-making process and are committed to the cause of achieving improvements.

Farmbench is an online benchmarking tool that allows you to compare your farm to similar businesses. It helps you to identify where you can improve efficiency and increase profits.

To find out more, visit ahdb.org.uk/farmbench

Key performance indicators

The following five points have been identified as the key performance indicators (KPIs) for assessing flock efficiency.

Record	Definition	Target
Flock replacement rate	The number of females needed to replace those leaving and maintain flock size.	15–25%
Ewes sold	Ewes sold for breeding and for slaughter as a percentage of females put to the ram last year	<16%
Ewe mortality	The number of females that died on farm as a percentage of females put to the ram last year	<2.5%
Lambs reared	Lambs sold finished, store, breeding or retained as a percentage of all females put to the ram last year	Indoor* 150–165% Indoor# 160–175% Outdoor* 145–160% Outdoor# 155–170%
Lamb losses from scanning to reared	Total number of lambs scanned in all females minus total number of lambs reared, as a percentage of the total number of lambs scanned in all females	10–12%
Daily live weight gain – reared lambs	Average weight gained from birth to sale divided by average age at sale	350–500 g/day

*Including ewe lambs

#Ewe and shearlings only

Mating records

Group					Total
Number of females put to the ram [A]					
Number of rams used [B]					
Average ewe weight (kg) at tuppung (weigh approx. 10–20% of the group)					
Date rams in [C]					
Date rams out [D]					
Ewe to ram ratio (ewes per ram) $[A \div B]$					
Mating period (days) $[D - C]$					

Scanning results – Ideally scan ewes 40–90 days post-tupping

Group					Total
Number of females put to the ram [A]					
Scanning date					
Number of empty ewes [B]					
Number of singles [C]					
Number of twins [D]					
Number of triplets [E]					
Number of quads [F]					
Total number of lambs [G] = ((Cx1)+(Dx2)+(Ex3)+(Fx4))					
Scanning % (G÷A) x 100					
% Empty ewes at scanning (B÷A) x 100					

Lambing summary

Group				Total
Number of females put to the ram [A]				
Scanning percentage (%) [B]				
Number of females lambded				
Date of first lamb [C]				
Date of last lamb [D]				
Number of singles born alive [E]				
Number of twins born alive [F]				
Number of triplets born alive [G]				
Number of quads born alive [H]				
Total number of lambs born alive [I] = (E×1)+(F×2)+(G×3)+(H×4)				
Total number of lambs turned out or tailed [J]				
Lambing period (days) (D-C)				
Lambs born alive per 100 females to ram (lambing percentage) [K] = (I÷A) × 100				
Lambs turned out per 100 females to ram (J÷A) × 100				
Lamb losses from born alive to turnout or tailed ((I-J)÷I) × 100				

Body condition scoring

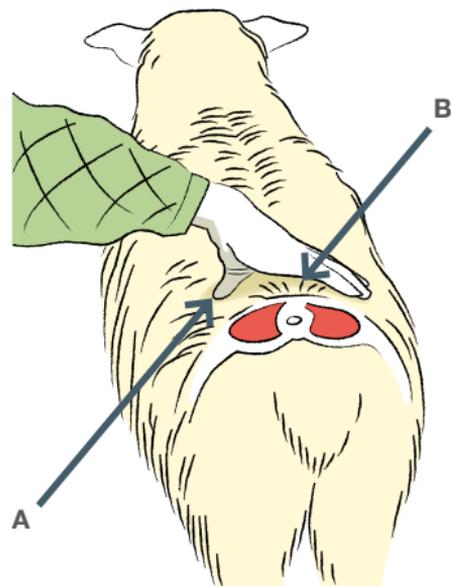
Body condition scoring (BCS) is a technique used for assessing the energy reserves of livestock at regular intervals.

It uses a scale from 1 (very thin) to 5 (very fat).

At least 90% of the flock should be at target BCS to optimise performance of the flock.

Target body condition scores

	Hill ewes	Upland ewes	Lowland ewes
At tupping	2.5	3.0	3.5
Pregnancy	2.0	2.5	3.0
At lambing	2.0	2.5	3.0
Eight weeks post-lambing	2.0	2.0–2.5	2.5–3.0
At weaning	2.0	2.0	2.5



A – Transverse processes

B – Spinous processes

Body condition scoring

Score	Description
1	<p>Spinous processes – prominent and sharp</p> <p>Transverse processes – prominent and sharp, fingers can be pushed easily below the transverse bone and each process can be felt</p> <p>Loin – thin with no fat cover</p>
2	<p>Spinous processes – prominent but smooth, individual processes felt only as corrugations</p> <p>Transverse processes – smooth and rounded, but still possible to press fingers underneath</p> <p>Loin – a moderate depth but little fat cover</p>
3	<p>Spinous processes – smooth and rounded; the bone is only felt with pressure</p> <p>Transverse processes – smooth and well-covered, ends can only be felt with hard pressure</p> <p>Loin – full and with moderate fat cover</p>
4	<p>Spinous processes – only detectable as a line</p> <p>Transverse processes – ends of the transverse processes cannot be felt</p> <p>Loin – full, rounded and have a thick covering of fat</p>
5	<p>Spinous processes – cannot be detected even with pressure</p> <p>Transverse processes – cannot be detected even with pressure</p> <p>Loin – very full and covered with very thick fat</p>

Sheep records for Better Returns

	Flock 1	Flock 2
Tupping	Number of ewes put to the ram (Ewe lambs should be recorded as separate flock)	
	Number of rams used	
	Number of lambs scanned in the ewes	
	Number of empty ewes at scanning	
Lambing	Number of lambs born alive (Up to 12 hours of age)	
	Number of lambs turned out or tailed (Approximately 48 hours)	
	Number of empty ewes at lambing	
Weaning	Number of lambs weaned (Include lambs sold before weaning)	
	Average age at weaning (days) (From 10 days from the start of lambing)	
	Average lamb weaning weight (kg) (Include lambs sold before weaning)	
	Average lamb weighing date (dd/mm/yy)	

Sheep records for Better Returns

Replacements		Flock 1	Flock 2
	Total number of breeding ewe deaths	<input type="text"/>	<input type="text"/>
	Total number of culled ewes	<input type="text"/>	<input type="text"/>
	Number of replacements bought or transferred into the breeding flock	<input type="text"/>	<input type="text"/>

Sales			
	Total number of lambs sold finished	<input type="text"/>	<input type="text"/>
	Total number of store lambs sold	<input type="text"/>	<input type="text"/>
	Total number of breeding ewe lambs sold	<input type="text"/>	<input type="text"/>
	Total number of lambs retained as replacements or stores	<input type="text"/>	<input type="text"/>
	Overall total number of lambs reared (Include finished and store lambs and retained replacements)	<input type="text"/>	<input type="text"/>
	Average sale weight (kg liveweight) (Include finished lambs, store lambs and retained replacements)	<input type="text"/>	<input type="text"/>

Forage records – Home-grown

Crop	Area cut	Total fresh weight produced (tonnes)	Clamp or bales?	Total wrap and net costs (£)

Understanding forage analysis

D-value – a measure of feed digestibility

The higher the D-value, the less concentrates are required for ewes pre-lambing.



Dry matter (DM%) – a measure of what is 'not' water

If silage is too wet (less than 25% DM), it is difficult for pregnant ewes to eat enough to meet their needs. If this is the case, the amount of concentrate required will be higher.



Crude protein (CP%) – a measure of the protein content

It is important to provide enough protein in supplementary feeds to make up any protein deficit in the forage.



Metabolisable energy (ME MJ/kg DM)

A measure of the usable energy available to the animal. When buying a supplement, make sure the ME is higher than that of the forage.



Total fermentation acids – a measure of total acid content

High levels of acids limit intake. Aim for levels <100 g/kg DM.

pH – a measure of acidity in silage

Target pH will vary depending on DM% of silage. Generally, less than 3 or higher than 5 suggests poor fermentation and lower palatability.



Ash (%) – a measure of mineral and trace element content

Forage has a natural level of ash, but levels over 10% in silage indicate soil contamination and poor fermentation and should not be fed to sheep.

Ammonia N – a measure of protein breakdown during the ensiling process

Levels greater than 10% indicate protein breakdown and poor fermentation.

Feed values

Forages	Dry matter (%)	Crude protein (DM%)	Metabolisable energy (MJ/kg DM)
Average grass silage	20–30	10–15	10.2
Good grass silage	23–33	10–18	10.7
Straw (barley)	87	4.0	6.5
Maize silage	25–35	9.0	10.8
White clover (grazed)	20	19.0	11.2
Fodder beet	12–19	6–8	12–12.5
Kale	15–17	14–17	10–11
Grazed grass	17–18	15–17	10.5–11.5
Cereals/legumes	Dry matter (%)	Crude protein (DM%)	Metabolisable energy (MJ/kg DM)
Barley	86.0	12.1	13.2
Wheat	86.0	12.8	13.8
Oats	86.0	11.0	12.0
Field beans	86.0	29.0	13.8
Field peas	86.0	24.0	12.8
Lupins	86.0	38.0	14.3

Straights/others	Dry matter (%)	Crude protein (DM%)	Metabolisable energy (MJ/kg DM)
Molassed sugar beet feed	89.0	10.0	12.5
Rapeseed meal	88.0	38.5	12.1
Soya bean meal (hipro)	88.0	52.0	13.8
Soya bean meal (lopro)	88.0	47.0	12.9
Maize gluten feed	89.0	21.7	12.5
Wheat feed	89.0	17.3	11.5
Wheat distillers' dark grains*	89.0	32.0	13.5
Distillers' barley*	89.0	26.0	12.7
Brewers' grains*	23.0	24.0	11.7
Citrus pulp feed	89.0	7.0	12.5
Potatoes	20.5	11.0	13.5
Molasses (beet) pulp	89.0	10.0	12.5
Molasses (cane)	75.0	6.0	12.6

*Check copper values

Field movements

Date	Field	Notes (movements: stock in/out)	Grass height in (cm or kg DM/ha)	Grass height out (cm or kg DM/ha)

Conversions

To convert	Multiply by	To convert	Multiply by
Length			
Inches to centimetres	2.5400	Centimetres to inches	0.3937
Feet to metres	0.3048	Metres to feet	3.2810
Yards to metres	0.9144	Metres to yards	1.0940
Miles to kilometres	1.6090	Kilometres to miles	0.6214
Area			
Sq inches to sq cms	6.4520	Sq cms to sq inches	0.1550
Sq feet to sq metres	0.0929	Sq metres to sq feet	10.7600
Sq yards to sq metres	0.8361	Sq metres to sq yards	1.1960
Acres to hectares	0.4047	Hectares to acres	2.4710
Volume			
Cu feet to cu metres	0.0283	Cu metres to cu feet	35.3100
Cu yards to cu metres	0.7646	Cu metres to cu yards	1.3080
Gallons to litres	4.5460	Litres to gallons	0.2200
Pints to litres	0.5680	Litres to pints	1.7598

To convert	Multiply by	To convert	Multiply by
Weight/fuel consumption/speed			
Ounces to grams	28.3500	Grams to ounces	0.0353
Pounds to kg	0.4536	Kg to pounds	2.2050
Hundredweight to kg	50.8023	–	–
Gallons per mile to litres per km	2.8250	Litres per km to gallons per mile	0.3540
Miles per hour to km per hour	1.6093	Km per hour to miles per hour	0.6214

Temperature conversion scales

To convert °F to °C – deduct 32
and multiply by 5, then divide by 9

To convert °C to °F – multiply by 9, then
divide by 5, then add 32

Breeding table – Use this at-a-glance guide to calculate lambing dates

Tupping	Lambing										
JULY 1	NOV 25	JULY 28	DEC 22	AUG 24	JAN18	SEP 20	FEB 14	OCT 17	MAR 13	NOV13	APR 9
2	26	29	23	25	19	21	15	18	14	14	10
3	27	30	24	26	20	22	16	19	15	15	11
4	28	31	25	27	21	23	17	20	16	16	12
5	29	AUG 1	26	28	22	24	18	21	17	17	13
6	30	2	27	29	23	25	19	22	18	18	14
7	DEC 1	3	28	30	24	26	20	23	19	19	15
8	2	4	29	31	25	27	21	24	20	20	16
9	3	5	30	SEP 1	26	28	22	25	21	21	17
10	4	6	31	2	27	29	23	26	22	22	18
11	5	7	JAN 1	3	28	30	24	27	23	23	19
12	6	8	2	4	29	OCT 1	25	28	24	24	20
13	7	9	3	5	30	2	26	29	25	25	21
14	8	10	4	6	31	3	27	30	26	26	22
15	9	11	5	7	FEB 1	4	28	31	27	27	23
16	10	12	6	8	2	5	MAR 1	NOV 1	28	28	24
17	11	13	7	9	3	6	2	2	29	29	25
18	12	14	8	10	4	7	3	3	30	30	26
19	13	15	9	11	5	8	4	4	31	DEC 1	27
20	14	16	10	12	6	9	5	5	APR 1	2	28
21	15	17	11	13	7	10	6	6	2	3	29
22	16	18	12	14	8	11	7	7	3	4	30
23	17	19	13	15	9	12	8	8	4	6	MAY 1
24	18	20	14	16	10	13	9	9	5	7	2
25	19	21	15	17	11	14	10	10	6	8	3
26	20	22	16	18	12	15	11	11	7	9	4
27	21	23	17	19	13	16	12	12	8	10	5

Notes

Notes

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