WINTER FEED ALLOCATION

Fodder Crop Requirements

The table below helps estimate how much fodder crop is required for different classes of stock. It gives a guide to how many animals can be fed per hectare over a 90-day period, and the likely level to full utilisation.

CROP	DM YIELD (T/HA)	NUMBER OF ANIMALS/HA OVER 90 DAYS				DAYS UNTIL UTILISATION
		Sheep		Cattle		
		Ewes	Lambs	Cows	Stores	
Kale	9	96	119	6	14	154-210
Rape/Kale Hybrid	3.5	37	46	3	5	70-110
Stubble Turnip	4	43	53	3	6	56-100
Swedes	9	96	119	4	14	170-220
Fodder Beet	17	181	225	12	26	175-210

Based on 70% of diet from crop and 25% wastage. Intakes assumed: ewes (70kg) 1.6% LW, lambs (30kg) 3% LW, cows (750kg) and stores (350kg) 2.2% LW.

Feed Allocation

The DM yields shown are guide values taken from book figures. Actual yield will vary with variety, soil, climate, and crop management. To plan feeding accurately, a simple field assessment should be carried out. This allows calculation of DM yield and daily allocation, which in turn determines how far to move the fence each day.

Measuring DM Yield – Quick Method

You will need:
- 1m^2 quadrat (or 3.54m pipe loop)
- Bag
- Shears or knife
- Hand scales
- Notebook & pen

Steps
1. Place the quadrat on a representative part of the field, avoiding headlands or poor patches.
2. Harvest within the square
   - Roots – lift all roots & leaves, clean off soil.
   - Leafy crops – cut 2–3cm above ground.
3. Weigh the sample.
4. Multiply weight by 10,000 = fresh weight/ha.
5. Multiply by crop DM % ÷ 100 = DM/ha.

Example:
Sample weight = 7kg
7 × 10,000 = 70,000kg FW/ha
× 15% DM = 10,500kg DM/ha = 10.5 t DM/ha

Using DM Yield

Once DM yield is known, stock requirements can be matched to available feed. This provides a practical guide to stocking rate, grazing duration, and fence movement. An example calculation for a 70kg ewe is shown overleaf.

Calculating Daily Allocation (adapted from AHDB)

		EXAMPLE: 70kg ewe
A	Total Estimated Intake (using 1.6% of liveweight)	1.20kg DM/day
B	Crop Inclusion of The Diet (allowing 30% fibrous forage)	70%
C	Daily Requirement of Forage (AxB)	0.84kg DM
D	Number of Animals Grazed	300
E	Daily Requirement of forage (CxD)	252kg DM
F	Estimated Crop Yield (DM/m2) (crop yield as above – 10.5 tonnes @ 80% utilisation – (1.05kg/m2 x 0.8)	0.84kg/DM/m2
G	Total Grazing Area Required/Day (E/F)	300m2
H	Length of Electric Fence (Feed Face)	150m
I	Width of Fence Moved Per Day (G/H)	2.00m/day

Using simple DM and daily allocation calculations shows how far to move the electric fence each day to achieve high utilisation.

A feed budget can then be used to calculate the total area needed for the winter, as shown below for 70kg ewes.

Calculating Feed Budget (adapted from AHDB)

		EXAMPLE: 70kg ewe
A	Total Estimated Intake (using 1.6% of liveweight)	1.20kg DM/day
B	Crop Inclusion of The Diet (allowing 30% fibrous forage)	70%
C	Daily Requirement of Forage (AxB)	0.84kg DM
D	Feeding Period	120 days
E	Total DM Requirement per Animal (CxD)	101kg DM
F	Total Required for flock (e.g.300 ewes x E/1000)	30.30T DM
G	Forage Utilised Yield (t DM/ha) 10.5T @ 80% utilised	8.40T DM
H	Forage Area Required for Winter (F/G)	3.60ha

Ensure an area of run-back is also budgeted for.