



CLAMP CONTENT CALCULATIONS

Volume (m³) = length (m) x width (m) x height (m) (account for sloping of ramps)

DM content (tonnes) = volume x DM density

Figure 1: Density in kg/m³:

%DM	Maize clamp height (m)			Grass silage clamp height (m)		
	2	3	4	1.5	2	2.5
20	155	175	190	-	-	-
25	170	195	210	185	195	200
30	185	205	220	205	215	225
35	200	220	235	215	230	245

Example

Volume: 40m x 20m x 2.5m = 2,000m³

Density: 25% DM grass silage & 2.5m clamp height = 200kg/m³ DM

DM Tonnes of grass silage = 2,000m³ x 200kg/m³ DM = 400,000kg = 400 tonnes



BALES SILAGE STOCKS

Average weight of 5 or more bales to be established initially.

Tonnes of fresh weight: (No of bales x average bale weight (kg)) / 1000

Tonnes of DM: Tonnes of FW x DM %

Figure 2: Bale assumptions

Roughage	Large round bales (1.3m diameter) weight (kg)	Equivalent no. of small rectangular bales/large bale	Large square bales (2.5x0.9x1.2m) weight (kg)	Equivalent no. of small rectangular bales/large bale
22-25% DM Silage unchopped	450-500	N/A	770	N/A
22-25% DM Silage chopped	600-700	N/A	N/A	N/A
Wheat straw unchopped	220	15	250	17
Wheat straw chopped	230	15	N/A	N/A
Hay unchopped	275	14	400	20

No. of large round grass silage bales: 2000 @ 25% DM

Fresh weight = 2000 x 450 kg average = 900,000kg = 900t

DM available = 900t x 25% DM = 225t



BUDGETING

Demand (kg): No. stock x forage allocation* (kg DM/d) x days of feeding) + safety margin (e.g. 10-15%)

* a separate calculation will be needed for each class of animal and each group (if fed differently)

Class of dairy stock	Average weight (kg)	DMI (% body weight)	DMI (kg)
Milking cows	650	3-3.5	19.7-22.75
Dry cows	700	1.7-2.0	11.9-14
Calves (<6 months)	110	3	3.3
Young heifers (6 months to post-service)	300	2.5	7.5
In-calf heifers (15 months to pre-calving)	500	2	10