

1-35 Summer deficit feed budget – how many cows to milk

Feed budget period: _____ to _____

No. of days	A	Opening milking cow numbers	H
Area ha	B	Opening dry stock and replacement numbers	I

Feed supply

Average pasture cover now	C	Kg DM/ha	
Average pasture cover period end	D	Kg DM/ha	
Available feed Kg DM/ha	C-D = E	B (ha)	$E \times B = J$ J
Pasture growth Kg DM/ha/day	G	A (days) B (ha)	$G \times A \times B = K$ K

Supplements available

Silage	Kg DM	}	L
Hay	Kg DM		
Maize	Kg DM		
Other	Kg DM		
Crops	Kg DM		
Total supplements	Kg DM	L	
Less supplements for winter	Total Kg DM	M	

Less supplements for when it rains ^{1/}	H No. cows	x	Kg DM/cow	N	L-M-N = O
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Feed available

				$J + K + O = P$	J+K+O = P
Less: Feed for maintenance	H	A (days)	Q Kg DM/cow	$H \times A \times Q = R$	
Less: Feed for young stock and dry cows	I	A (days)	S Kg DM/head	$I \times A \times S = T$	R+T = U
Total Kg DM available for milk production				$P - U = V$	P-U = V

Feed demand/cow for milk production	Kg MS/cow/d	W kg DM/cow/d	A (days)	$W \times A = Z$	Z
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Number of cows you can milk	Total Kg DM for milk production ÷ Feed demand/cow for budget period	$V \div Z$	
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^{1/} Need minimum of 100 kg DM/cow when it rains

Feed demand for maintenance & milk production Kg DM per cow based on 10.5 ME

Maintenance		Kg MS/cow					
400 kg lwt	500 kg lwt	0.7	0.8	0.9	1.0	1.1	1.2
5.0	6.0	5.1	5.8	6.6	7.3	8.1	8.8

Example of summer feed budget

Feed budget period: 1st Feb to 10th March

No. of days	A 40	Opening milking cow numbers	H 300
Area ha	B 135	Opening dry stock and replacement numbers	I 50

Feed supply

Average pasture cover now	C 1750	Kg DM/ha		
Average pasture cover period end	D 1400	Kg DM/ha		
Available feed Kg DM/ha	C-D = E 350	B (ha) 135	E x B = J	J 47,250
Pasture growth Kg DM/ha/day	G 5	A (days) 40	B (ha) 135	G x A x B = K K 27,000

Supplements available

Silage	Kg DM	60,000	} L		
Hay	Kg DM				
Maize	Kg DM				
Other	Kg DM	40,000			
Crops	Kg DM				
Total supplements	Kg DM	L 100,000			
Less supplements for winter	Total Kg DM	M -0			
Less supplements for when it rains ^{1/}	H No. cows 300	x	Kg DM/cow 100	N -30,000	L-M-N = O 70,000
Feed available	J + K + O = P				J+K+O = P 144,250

Less: Feed for maintenance	H No. cows 300	A (days) 40	Q Kg DM/cow 6.0	H x A x Q = R 72,000	
Less: Feed for young stock and dry cows	I No. head 50	A (days) 40	S Kg DM/head 6.0	I x A x S = T 12,000	R+T = U 84,000
Total Kg DM available for milk production	P - U = V				P-U = V 60,250

Feed demand/cow for milk production	Kg MS/cow/d 0.9	W kg DM/cow/d 6.6	A (days) 40	W x A = Z	Z 264
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Number of cows you can milk	Total Kg DM for milk production ÷ Feed demand/cow for budget period	V ÷ Z	228
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^{1/} Need minimum of 100 kg DM/cow when it rains

Feed demand for maintenance & milk production Kg DM per cow based on 10.5 ME

Maintenance		Kg MS/cow					
400 kg lwt	500 kg lwt	0.7	0.8	0.9	1.0	1.1	1.2
5.0	6.0	5.1	5.8	6.6	7.3	8.1	8.8