

Appendix 3b

Ration Worksheet - Suckler Cows

BASIC INFORMATION

1	No of cows		6	Predicted M/D (MJ/kg DM)		Table 3.2
2	Average weight (kg) ¹		7	ME requirement (MJ/day)		Table 3.4
3	Autumn condition score		8	Required CP in diet (decimal)		Table 4.2
4	Daily weight loss (kg) ²		9	Feeding period (days)		
5	Daily milk yield (kg) ²					

¹ Actual or Table 1.4

² Table 3.4

FEED INGREDIENTS

10	11	12	13
Feed ingredients	DM (Decimal)	ME (MJ/kgDM)	CP (Decimal)

Look up Table 3.1 or a feed analysis for values in columns 11, 12 and 13

FORAGE POTENTIAL

14	15	16	17
Potential forage DMI (kg)	Potential forage ME (MJ/day)	Forage ME shortfall (MJ/day)?	Concentrate substitution (kg forage/kg concentrates)

Column 14: Look up value in Table 2.2

Column 15: Potential forage DMI from 14 x forage ME from 12

Column 16: Total ME requirement from 7 minus potential forage ME from 15. If there is an excess of ME formulate a ration including a cheaper lower quality forage e.g. straw

Column 17: Look up reduction in forage DMI per kg concentrates fed in Table 2.2

RATION FORMULATION

18	19	20	21	22
Feed ingredients	Net value of 1 kg concentrates (MJ ME/kg DM)	Concentrate DMI (kg/day)	Concentrate ME (MJ ME/kg DM)	Actual forage DMI (kg/day)

Column 19: ME of 1 kg concentrates from 12 minus substitution from 17 x forage ME from 12

Column 20: ME shortfall from 16 ÷ net value of concentrates from 19

Column 21: Concentrate DMI from 20 x ME of concentrates from 12

Column 22: Total ME from 7 minus concentrate ME from 21 ÷ forage ME from 12

CHECK RATION M/D AND CP CONTENT

23	24	25	26
Feed ingredients	DMI (kg/day)	ME (MJ/day)	CP (ration proportion)
Forage			
Concentrates			
Totals			
M/D (MJ ME/kg DM)	-		-
CP (ration proportion)	-	-	
		M/D OK?	CP content OK?

Column 24: Concentrate DMI from 20 + forage DMI from 22

Column 25: Concentrate ME from 21 + forage DMI from 22 x ME value from 12. Divide the total ME by the total DMI from 24, calculate the actual M/D and check that it is within 0.5 of the predicted value in 6. If the difference is more go back to 6 and enter the M/D from 27, enter a revised ME requirement in 7 and revise values in columns 16, 20, 21, 22, 24 and 25.

Column 26: Concentrate DMI from 20 x concentrate CP value from 13 + Forage DMI from 22 x forage CP value from 13. Divide by the total DM and check that the actual ration CP content is not more than 0.01 below the requirement in 8. If above, are protein savings possible?

DAILY RATION AND FEED BUDGETS

27	28	29	30	31
Feed ingredients	Daily Concentrates	Daily Forage	Feed budget per head	Total feed budget
	(kg fresh weight)	(kg fresh weight)	(tonnes)	(tonnes)

Column 28: Concentrate DMI from 20 ÷ Concentrate DM content from 11

Column 29: Forage DMI from 22 ÷ Forage DM content from 11

Column 30: Daily concentrates from 28 x feeding period from 9. Daily forage from 29 x feeding period. If required calculate the daily feed cost.

Column 31 Feed budget per head x number of cattle from 1