

Appendix 6 Exercises from the manual

The following exercises are based on a small holder dairy farmer with several feeds available for his herd of milking cows, all at different stages of their lactation cycle. Cows then differ in their levels of milk production and milk composition and their pregnancy status. Information for calculating cow requirements is presented in Chapter 6 and for formulating rations in Chapter 12.

Exercise 1

Using copies of the following Work sheet 4 provided, calculate the energy, protein and fibre requirements of four cows, all in stalls:

- A A 550 kg cow in early lactation producing 20 L milk/d containing 3.6% fat and 3.2% protein. She is not pregnant and as she is using body condition to produce milk, she is losing 0.5 kg/day in live weight.
- B A 500 kg cow in early lactation producing 17 L milk/d containing 3.6% fat and 3.2% protein. She is not pregnant and her body condition is stable so her live weight is not changing.
- C A 500 kg cow in late lactation producing 5 L milk/d containing 4.0% fat and 3.8% protein. She is seven months pregnant and is gaining body condition at the rate of 0.5 kg/d.
- D A non-lactating 500 kg cow. The cow is stalled in shed so has no activity allowance. She is nine months pregnant and is gaining body condition at the rate of 1.0 kg/d.