

# Calculating supplementary feed amounts

## Total daily requirements for various classes of cattle

Table 1. Steers and heifers (after weaning)

| Live weight<br>(kg) | Growth rate<br>(kg/day) | Maximum daily dry matter<br>(DM) intake |      | Metabolised<br>energy (ME)<br>requirement<br>(MJ/day) | Minimum ME<br>concentration<br>of diet<br>(MJ/kg DM) | Crude protein<br>percentage of<br>dietary dry matter<br>% |
|---------------------|-------------------------|---|------|---|--|---|
|                     |                         | % of live<br>weight                     | (kg) |   |  |   |
| 150                 | 0                       | 2.9                                     | 4.3  | 22  | 5.2*   | 8   |
|                     | 0.5                     | 2.9                                     | 4.3  | 37  | 8.7  | 12  |
|                     | 1.0                     | 2.9                                     | 4.3  | 50  | 11.6   | 13  |
| 200                 | 0                       | 2.8                                     | 5.5  | 26  | 4.8*   | 8   |
|                     | 0.5                     | 2.8                                     | 5.5  | 44  | 8.0  | 11  |
|                     | 1.0                     | 2.8                                     | 5.5  | 59  | 10.7   | 13  |
| 300                 | 0                       | 2.5                                     | 7.6  | 35  | 4.6*   | 8   |
|                     | 0.5                     | 2.5                                     | 7.6  | 57  | 7.5  | 10  |
|                     | 1.0                     | 2.5                                     | 7.6  | 76  | 10.0   | 13  |
| 400                 | 0                       | 2.4                                     | 9.4  | 45  | 4.8*   | 8   |
|                     | 0.5                     | 2.4                                     | 9.4  | 71  | 7.6  | 9   |
|                     | 1.0                     | 2.4                                     | 9.4  | 93  | 9.9  | 13  |
| 500                 | 0                       | 2.1                                     | 10.7 | 55  | 5.1*   | 7   |
|                     | 0.5                     | 2.1                                     | 10.7 | 82  | 7.7  | 10  |
|                     | 1.0                     | 2.1                                     | 10.7 | 108   | 10.1   | 12  |

\* Cattle on these diets may not eat to full appetite because of the very poor quality (low ME values) of these particular diets.

Table 2. Cows dry, pregnant mature\*

| Live weight<br>(kg) | Growth<br>rate<br>(kg/day) | Maximum daily dry<br>matter (DM) intake |      | Metabolised energy<br>(ME) requirement<br>(MJ/day) | Minimum ME<br>concentration<br>of diet<br>(MJ/kg DM) | Crude protein<br>percentage of<br>dietary dry matter<br>% |
|---------------------|----------------------------|---|------|--|--|---|
|                     |                            | % of live<br>weight                     | (kg) |  |  |   |
| 350                 | 0                          | 2.4                                     | 8.5  | 48-60  | 5.6-7.1  | 6   |
| 400                 | 0                          | 2.3                                     | 9.4  | 52-65  | 5.5-6.9  | 6   |
| 450                 | 0                          | 2.2                                     | 10.1 | 57-69  | 5.6-6.8  | 6   |
| 500                 | 0                          | 2.1                                     | 10.7 | 61-74  | 5.7-6.9  | 6   |
| 550                 | 0                          | 2.0                                     | 11.2 | 66-78  | 5.9-7.0  | 6   |

\* Range of values for cows which are 6-9 months pregnant

Table 3. Cows with suckling calves up to four months old

| Live Weight<br>(kg) | Growth Rate<br>(kg/day) | Maximum Daily dry matter (DM) intake |      | Metabolised energy (ME) requirement<br>(MJ/day) | Minimum ME concentration of diet<br>(MJ/kg DM) | Crude Protein percentage of dietary dry matter<br>% |
|---------------------|-------------------------|--------------------------------------|------|---|--|---|
|                     |                         | % of live weight                     | (kg) |   |  |   |
| 350*                | 0                       | 2.4                                  | 8.5  | 74  | 8.7  | 10  |
|                     | 0.5                     | 2.4                                  | 8.5  | 91  | 10.7   | 11  |
| 400*                | 0                       | 2.3                                  | 9.4  | 80  | 8.5  | 10  |
|                     | 0.5                     | 2.3                                  | 9.4  | 97  | 10.3   | 11  |
| 450                 | 0                       | 2.2                                  | 10.1 | 85  | 8.4  | 10  |
| 500                 | 0                       | 2.1                                  | 10.7 | 90  | 8.4  | 10  |
| 550                 | 0                       | 2.0                                  | 11.2 | 95  | 8.4  | 10  |

\* Young cows at these weights probably need to put on some weight after calving (for example, 0.5 kg/day) because they have not yet reached their adult weight and therefore need better feed than older cows.

Table 4. Bulls

| Live Weight<br>(kg) | Growth Rate<br>(kg/day) | Maximum Daily dry matter (DM) intake |      | Metabolised energy (ME) requirement<br>(MJ/day) | Minimum ME concentration of diet<br>(MJ/kg DM) | Crude Protein percentage of dietary dry matter<br>% |
|---------------------|-------------------------|--------------------------------------|------|---|--|---|
|                     |                         | % of live weight                     | (kg) |   |  |   |
| 400                 | 1.0                     | 2.4                                  | 9.4  | 93  | 9.9  | 13  |
|                     | 0.5                     | 2.1                                  | 10.7 | 82  | 7.7  | 11  |
| 500                 | 1.0                     | 2.1                                  | 10.7 | 108   | 10.1   | 12  |
|                     | 0                       | 2.0                                  | 11.7 | 63  | 5.4  | 10  |
|                     | 0.5                     | 2.0                                  | 11.7 | 95  | 8.1  | 11  |
| 600                 | 1.0                     | 2.0                                  | 11.7 | 122   | 10.4   | 12  |
|                     | 0                       | 1.8                                  | 14.4 | 81  | 5.6  | 10  |
| 800                 | 0.5                     | 1.8                                  | 14.4 | 117   | 8.1  | 10  |

### More information:

Drought Feeding and Management of Beef Cattle, a guide for farmers and land managers  
Victorian Department of Primary Industries & MLA 2007  
(ISBN 978 -1-741 99-0355-5 online)

[http://agriculture.vic.gov.au/\\_data/assets/pdf\\_file/0003/312735/Beef-cattle-drought-feeding-guide.pdf](http://agriculture.vic.gov.au/_data/assets/pdf_file/0003/312735/Beef-cattle-drought-feeding-guide.pdf)



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