

Errata (Version 1)

NOTE: For errata and software updates please visit <https://www.nap.edu/catalog/19014> and click on the Resources tab.

The following updates were made to *Nutrient Requirements of Beef Cattle: Eighth Revised Edition*.

Page 60, Eq. 3-11, $+ 0.174\text{ME}^2$ was changed to $- 0.174\text{ME}^2$ to read:

$$\text{NEg} = 1.42\text{ME} - \mathbf{0.174\text{ME}^2} + 0.0122\text{ME}^3 - 1.65 \quad (\text{Eq. 3-11})$$

Page 77, Eq. 4-2, $- 0.00963$ was changed to $+ 0.00963$ to read:

$$\begin{aligned} \text{Mean ruminal pH} &= 5.724 + \mathbf{0.00963} \\ &\times \text{forage (\% of dietary DM)}; r^2 = 0.76; n = 97 \end{aligned} \quad (\text{Eq. 4-2})$$

Page 221, Eq. 13-37, 0.0013 was changed to 0.13 to read:

$$\text{MEy} = \text{NEy}/\mathbf{0.13} \quad (\text{Eq. 13-37})$$

Page 275, Eq. 16-9, DMI^3 was changed to DMI^2 to read:

$$\begin{aligned} \text{CH}_4, \text{ g/d} &= -10.1 (\pm 0.62) + 0.21 (\pm 0.001) \times \text{BW} \\ &+ 0.36 (\pm 0.003) \times \mathbf{\text{DMI}^2} - 69.2 (\pm 1.65) \times \text{Fat}^3 \\ &+ 13.0 (\pm 0.45) \times (\text{CP/NDF}) - 4.9 (\pm 0.07) \\ &\quad \times (\text{Starch/NDF}), \end{aligned} \quad (\text{Eq. 16-9})$$

Page 277 (Table 16-2), Eq. 16-9 (Escobar-Bahamondes and Beauchemin), 10.1 was changed to -10.1 ; Fat was changed to Fat^3 , to read:

$$\begin{aligned} \text{CH}_4, \text{ g/d} &= \mathbf{-10.1} (\pm 0.62) + 0.21 (\pm 0.001) \times \text{BW, kg} \\ &+ 0.36 (\pm 0.003) \times \text{DMI}^2, \text{ kg/d} - 69.2 (\pm 1.65) \times \mathbf{\text{Fat}^3}, \text{ kg/d} \\ &+ 13.0 (\pm 0.45) \times (\text{CP/NDF}) - 4.9 (\pm 0.07) \times (\text{Starch/NDF}) \end{aligned}$$

At the bottom of Table 16-2, this footnote was added:

GEI = gross energy intake (Mcal/d)

Page 357, Eq. 19-36, Prot was inserted in the equation to read:

$$\text{TotalMPI} = \text{TotalYProt}/0.65 \quad (\text{Eq. 19-36})$$

Page 367, Eq. 19-128, NDF was changed to NDFI to read:

$$\begin{aligned} \text{CH}_4 &= (-1.01 + 2.76 \times \mathbf{\text{NDFI}} + 0.722 \times \text{CB1I}) \\ &\quad \times 1,000/55.65 \end{aligned} \quad (\text{Eq. 19-128})$$

Page 367, Eq. 19-131, 0.32 was changed to 0.032 to read:

$$\text{CH}_4 \text{ (Animal Level)} = \begin{cases} \left(\begin{array}{l} -0.221 + 0.048 \\ \times \text{GEI} \times 4.184 \\ + 0.005 \times \text{BW} \end{array} \right) \times \frac{1,000}{55.65}, \text{ Males} \\ \left(\begin{array}{l} -1.487 + 0.046 \\ \times \text{GEI} \times 4.184 \\ + 0.032 \times \text{NDF} \\ + 0.006 \times \text{BW} \end{array} \right) \times \frac{1,000}{55.65}, \text{ Females} \end{cases} \quad (\text{Eq. 19-131})$$

Page 367, Eq. 19-135, Forage was changed to Forage_% to read:

$$\text{CH}_4 = (0.357 + 0.0591 \times \text{MEI} \times 4.184 + 0.05 \times \text{Forage}_{\%}) \times 1,000/55.65 \quad (\text{Eq. 19-135})$$

Page 368, Eq. 19-136, Forage was changed to Forage_% to read:

$$\text{CH}_4 = (-1.02 + 0.681 \times \text{DMI} + 0.0481 \times \text{Forage}_{\%}) \times 1,000/55.65 \quad (\text{Eq. 19-136})$$

Page 368, Eq. 19-137, NDF was changed to NDFI to read:

$$\text{CH}_4 = (-1.01 + 2.76 \times \text{NDFI} + 0.722 \times \text{CB1I}) \times 1,000/55.65 \quad (\text{Eq. 19-137})$$

Page 368, the sentence “Note, however, that the coefficient of 3% (Eq. 19-142 and 19-143)” was changed to “Note, however, that the coefficient of 3% (Eq. 19-139 and Eq. 19-142)”

Page 371, an asterisk (*) was added to kd_{CB3,j} in Eq. 19-176 to read:

$$Y_{\text{CB3},j} = 1/(\text{KM2}/\text{kd}_{\text{CB3},j}^* + 1/\text{YG2}) \quad (\text{Eq. 19-176})$$

Page 372, Eq. 19-180 left hand side, very top line – 0.00963 was changed to + 0.00963 to read:

$$\text{pH} = \begin{cases} \left\{ \begin{array}{l} 5.724 + 0.00963 \times \text{Forage}_p \\ \text{BW} > 200 \text{ kg, Forage}_p < 50\%, \text{ peNDF} = 0 \\ 6.2, \text{ Forage}_p \geq 50\%, \text{ peNDF} = 0 \end{array} \right. \\ \left\{ \begin{array}{l} 5.46 + 0.038 \times \text{peNDF}, \text{ peNDF} < 26.3\%, \text{ peNDF} > 0 \\ 6.46, \text{ peNDF} \geq 26.3\%, \text{ peNDF} > 0 \end{array} \right. \end{cases} \quad (\text{Eq. 19-180})$$

Page 372, an asterisk (*) was deleted from Y_{CB3,j} in Eq. 19-188 to read:

$$\text{BACT}_j = \text{RDCA}_j \times Y_{\text{CA},j} + \text{RDCB1}_j \times Y_{\text{CB1},j} + \text{RDCB2}_j \times Y_{\text{CB2},j} + \text{RDCB3}_j \times Y_{\text{CB3},j} \quad (\text{Eq. 19-188})$$

Page 378, Eq. 19-260, 64 was changed to 74 to read:

$$Y\text{CH}_{4,j}^{\text{CA,CB1,CB2,CB3}} = \left(\frac{1}{2 \times \text{FracP}_j^{\text{CA,CB1,CB2,CB3}}} - \frac{3}{4} \right) \times \frac{16}{74} \quad (\text{Eq. 19-260})$$

Page 378, Eq. 19-261, divisors were added to

Propionate_j^{CA,CB1,CB2,CB3}, Acetate_j^{CA,CB1,CB2,CB3}, and Butyrate_j^{CA,CB1,CB2,CB3} to read:

$$\text{FracP}_j^{\text{CA,CB1,CB2,CB3}} = \frac{\text{Propionate}_j^{\text{CA,CB1,CB2,CB3}} / 74}{\left(\begin{array}{l} \text{Acetate}_j^{\text{CA,CB1,CB2,CB3}} / 60 \\ + \text{Propionate}_j^{\text{CA,CB1,CB2,CB3}} / 74 \\ + \text{Butyrate}_j^{\text{CA,CB1,CB2,CB3}} / 88 \end{array} \right)} \quad (\text{Eq. 19-261})$$