Net Energy for Growing & Finishing Beef Cattle – Part 2

NE values of feeds + feed intake can be used to:
  Predict amount of feed required for particular gain (programmed feeding)
  For example, used in heifer development

Programmed Feeding Example

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% of diet</th>
<th>NE$_m$, Mcal/kg</th>
<th>NE$_m$ supplied, Mcal/kg</th>
<th>NE$_g$, Mcal/kg</th>
<th>NE$_g$ supplied, Mcal/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>3</td>
<td>2.24</td>
<td>0.03 x 2.24 = 0.0672</td>
<td>1.55</td>
<td>0.03 x 1.55 = 0.0465</td>
</tr>
<tr>
<td>Alfalfa</td>
<td>97</td>
<td>1.12</td>
<td>0.97 x 1.12 = 1.086</td>
<td>0.54</td>
<td>0.97 x 0.54 = 0.524</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>----------------</td>
<td>1.15</td>
<td>---------------</td>
<td>0.57</td>
</tr>
</tbody>
</table>

The diet fed above supplies: \( \frac{1.15}{0.57} \) Mcal/kg of NE$_m$, and \( \frac{1.15}{0.57} \) Mcal/kg of NE$_g$

600 lb calf (1,200 finished weight)
Want 1.0 lb/d ADG
How much of the above diet do we need to feed?

Requirements (from Table 7):
  5.16 Mcal NE$_m$ for maintenance
  1.42 Mcal NE$_g$ for gain

Diet composition:
  1.15 Mcal/kg NE$_m$
  0.57 Mcal/kg NE$_g$

5.16 Mcal NE$_m$/1.15 Mcal/kg NE$_m$ = 4.49 kg for maintenance
1.42 Mcal NE$_g$/0.57 Mcal/kg NE$_g$ = 2.49 kg for gain
Total = 4.49 kg + 2.49 kg = 6.98 kg alfalfa
Convert to lbs
6.98 kg /0.454 = 15.4 lb diet