

Worksheet 2: Calculating the ME, CP and NDF content of a diet - Rumen8 Tropics Course

Dry matter	Energy	Protein	Fibre
Pasture <div style="text-align: right;">A</div> <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">kg DM /cow/day</div>	<div style="text-align: right;">F</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from A</div> <div style="text-align: center;">MJ/kg DM from feed test</div> <div style="text-align: center;">MJ/cow/day</div> </div>	<div style="text-align: right;">J</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from A</div> <div style="text-align: center;">protein % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>	<div style="text-align: right;">O</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from A</div> <div style="text-align: center;">NDF % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>
Supplement 1: <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">kg/cow/day</div> <div style="text-align: center;">dry matter % from feed test</div> <div style="text-align: center;">kg DM /cow/day</div> </div>	<div style="text-align: right;">G</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from B</div> <div style="text-align: center;">MJ/kg DM from feed test</div> <div style="text-align: center;">MJ/cow/day</div> </div>	<div style="text-align: right;">K</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from B</div> <div style="text-align: center;">protein % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>	<div style="text-align: right;">P</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from B</div> <div style="text-align: center;">NDF % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>
Supplement 2: <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">kg/cow/day</div> <div style="text-align: center;">dry matter % from feed test</div> <div style="text-align: center;">kg DM /cow/day</div> </div>	<div style="text-align: right;">H</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from C</div> <div style="text-align: center;">MJ/kg DM from feed test</div> <div style="text-align: center;">MJ/cow/day</div> </div>	<div style="text-align: right;">L</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from C</div> <div style="text-align: center;">protein % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>	<div style="text-align: right;">Q</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from C</div> <div style="text-align: center;">NDF % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>
Supplement 3: <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">kg/cow/day</div> <div style="text-align: center;">dry matter % from feed test</div> <div style="text-align: center;">kg DM /cow/day</div> </div>	<div style="text-align: right;">I</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from D</div> <div style="text-align: center;">MJ/kg DM from feed test</div> <div style="text-align: center;">MJ/cow/day</div> </div>	<div style="text-align: right;">M</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from D</div> <div style="text-align: center;">protein % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>	<div style="text-align: right;">R</div> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; width: 100px; height: 30px;"></div> X <div style="border: 1px solid black; width: 100px; height: 30px;"></div> ÷ 100 = <div style="border: 1px solid black; width: 100px; height: 30px;"></div> </div> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">from D</div> <div style="text-align: center;">NDF % from feed test</div> <div style="text-align: center;">kg/cow/day</div> </div>
Total daily dry matter intake <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">A+B+C+D kg DM/cow</div>	Total daily energy intake <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">F+G+H+I MJ /cow</div>	Total daily protein intake <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">J+K+L+M kg/cow</div> Protein % of ration <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">N ÷ E X 100</div>	Total daily fibre intake <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">O+P+Q+R kg/cow</div> NDF % of ration <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">S ÷ E x100</div>
Cow requirements (from Worksheet 1)	Total daily energy requirement <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">MJ</div>	Crude protein requirement <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">%</div>	Fibre requirement <div style="border: 1px solid black; width: 100px; height: 30px; margin: 0 auto;"></div> <div style="text-align: center;">% NDF</div>