

Unit Standard 19081

Describe annual feed supply and demand, methods to manage feed surpluses and deficits, and perform calculations

Assessment Task (Sheep & Beef Version)

Learner to complete

Learner Name	_____
Learner Phone Number	_____
Learner Address	_____ _____
Learner Declaration	I declare that all work is my own.
Signature	_____ Date _____

Assessor to complete

Result	Standard Achieved <input type="checkbox"/>	Further Evidence Required <input type="checkbox"/>
Comments/Areas to revisit	_____	
Assessor's Name	_____	
Signature	_____	Date _____

Re-assessment (if required) – Assessor to complete

Re-assessment Date	_____	
Result	Standard Achieved <input type="checkbox"/>	Further Evidence Required <input type="checkbox"/>
Signature	_____	Date _____

Instructions

- Write your name, phone number and address on the front page.
- Answer all questions in the spaces provided, use more paper if required.
Alternatively the assessment could be completed orally with the assessor.
- You must show that you have achieved the standard by fully completing this assessment.
- If you do not attain the standard you will have an opportunity to attempt the assessment again.
- This is an open book assessment.

Question 1

Why do farmers make hay or silage? Use the following words in your answer:

Animal demand; surplus; deficit; feed quality.

Question 2

How does making hay or silage affect the following in a paddock?

- Soil fertility: _____

- Pasture re-growth: _____

Question 3

Scenario: Bill Kenny manages a sheep & beef unit in Taranaki. This includes 160 effective hectares, running 1600 ewes and purchasing 80 250kg weaner steers or bulls in March or April.

The following table (feed budget) shows the feed profile of Bill's farm for one year. For the purposes of this budget we have included the replacement stock in the ewe numbers. It is also assumed that it is an August lambing date.

Start APC 2000kgDM/ha	June	July	August	September	October	November	December	January	February	March	April	May
Monthly pasture growth (kgDM/ha)	15	11	18	30	70	65	53	47	34	40	36	25
Ewes (kgDM/ha/day)	13	13	13	25	25	10	10	10	10	14	14	14
Steers/bulls (kgDM/ha/day)	18	18	21	21	30	40	40	35	29	16	16	16
TOTAL DEMAND (kgDM/ha/day)	31	31	34	36	55	55	50	45	39	30	30	30
Surplus or deficit (kgDM/ha/day)	-16	-20	-16	-6	+15	+10	+3	+2	-5	-10	-6	-5
Average pasture cover (kgDM/ha/day)	1520	900	404	224	465	989	1080	1142	1002	692	512	357
Supplements (kgDM/ha/day)	16	20	20	10					10	5	5	5
Type of supplement	Hay Grass/turnips		Hay		Any pasture surplus is harvested as supplement to maintain the average pasture cover at 2000kgDM/ha				Hay			
APC with supplement added	2000	2000	2124	2248	2000	2000	2000	2062	2202	2047	2022	2022

a) Answer the following questions about average pasture cover (APC):

I. What is average pasture cover (APC)? _____

II. Why is APC important? _____

III. From the feed budget on page 5, why do you think supplements have been used to try to get the final cover (APC) at the end of July up to 2000kgDM/ha? _____

b) The pasture growth figures in the feed budget above are predicted figures for a Taranaki farm. How might they be different on your farm or in another region? (You don't need to provide figures in your answer.)

c) The supplement used in July/August to fill the feed deficit is hay and crop.

Give **two** other options you could have used if you had run out of hay in August and **one** advantage and disadvantage for each option.

Option 1: _____

Advantage: _____

Disadvantage: _____

Option 2: _____

Advantage: _____

Disadvantage: _____

d) There is a feed surplus in October/November: What are **three** things you do about this?

1. _____

2. _____

3. _____

e) The supplement used to fill the feed deficit from February–March is hay. If this was not available, give **two** other options you could use to make sure your APC did not drop below the desired level.

Option 1: _____

Option 2 _____

f) Why does the feed demand increase rapidly in October–December?

g) Why is feed demand much less during the winter months compared with the summer? _____

h) How will pasture quality change from September–December?

How will this pasture quality change affect livestock growth rates?

i) What could pasture quality be like in February/March in areas that experience summer drought or low rainfall and are not irrigated, and why?

How could this quality of pasture affect livestock growth rates?

What could be done about this? _____

Question 4

Show your workings for the following questions.

- a) You are break-feeding a mob of young cattle during the winter. The next paddock you are due to graze has 2800kgDM/ha and is 1.6ha in size. You are aiming for a residual of 1200kgDM/ha.

If you feed the cattle 7kgDM/head/day and you have 50 in this mob, how many days will the paddock last?

Answer: _____

Workings: _____

- b) You have 300 weaned ewe lambs weighing 22kg with a target growth rate of 100g/day. This means the lambs need 1kgDM/day. The area you want to graze has a cover of 2200 kgDM/ha. You are aiming to leave a residual cover of 1300 kgDM/ha.

What area will be needed each day?

Answer: _____

Workings: _____

c) What is the total area grazed over 30 days?

Answer: _____

Workings: _____

Question 5

Calculate the total kgDM available for each feed below.

Feed	DM/unit	Total kgDM
60 round bales	140kgDM/bale	_____ _____ _____
Silage (pasture) stack 20 x 5 x 2 m	180 kgDM/m ³	_____ _____ _____