

# Project - 3

Subject : **Livestock Production Economic**, Class S  
 Venue : Friday, 15 February 2019  
 Type : Take Home  
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The function of milk production (Y) with concentrate feed (X) is

$$Y = 6 + 10 X - X^2$$

❖ Milk price (Py) is \$6. And Concentrate feed (Px) : \$4

**Question 1: Calculate**

- 1a. Total Revenue ( TR ) when using concentrate feed (X)=3 unit
- 1b. Count Total Cost (TC) when utilising X = 3 unit.
- 1c. Fill the following BEP table:

**Table 1. BEP with concentrate feed only**

Explanation	Calculation	Results
<b>1. Total Revenue (TR)</b>		
1.1. The planning of revenue	=Py x Y	
	= .....	.....
1.2. The BEP of revenue	=Total Cost with concentrate feed only	
	= .....	.....
<b>2. The milk price per liter (Py)</b>		
2.1. The milk market price per liter	.....	.....
2.2. The BEP per liter milk	=TC/Milk production	
	=\$.....	.....
<b>3. Total of milk production (Y)</b>		
3.1. The planning of milk production	.....	.....
3.2. The BEP of the total of milk production	= TC/ milk price per liter	
	.....	.....

1d. Fill the MOS table below

**Table 2. MOS with concentrate feed only**

Explanation	Calculation	Results
<b>1. Total Revenue (TR)</b>		
1.1.The planning of revenue (\$)	= Y x Py	
<b>1.2. The BEP of revenue</b>	=Total Cost with concentrate feed only	
	' .....	' .....
<b>3. Margin of Safety</b>		
3a. MOS (\$)	=(Revenue plan- BEP revenue)	' .....
	' .....	' .....
<b>3b. MOS (%)</b>	=(Revenue plan- BEP revenue)/revenue plan x (100%)	
	' .....	' .....

2. Other variable cost =\$70 and fixed cost (FC) =\$30, calculate :

2a. Total Revenue with **all inputs**.

2b. Total Cost =TC when using **all inputs**.

c. Fill the BEP with the complete input below :

**Table 3. BEP with complete inputs**

Explanation	Calculation	Result
<b>1. Total Revenue (TR)</b>		
1.1.The planning of revenue (\$)	= Y x Py	
	.....	.....
<b>1.2. The BEP of revenue (\$)</b>	= <b>The complete of Total Cost</b>	
	= .....	.....
<b>2. Milk price (Py)</b>		
2.1.The milk market price per liter (\$.)	= .....	.....
<b>2.2. BEP of milk per liter (\$)</b>	= TC / Milk production	
	= .....	.....
<b>3. Total milk production (Y)</b>		
3.1.The planning of total milk production (Liter)	= ..... Liter	.....
<b>3.2. BEP of total milk production (Liter)</b>	= TC /milk price per liter	
	= .....	.....

2.d. Fill the following MOS table (with complete input) :

Table 4. MOS with complete inputs

Explanation	Calculation	Results
<b>II. Milk price per liter (Py)</b>		
1. Milk market price per liter	' .....	' .....
<b>2. The BEP of milk price per liter</b>	= TC / milk production	
	.....	' .....
<b>3. Margin of Safety</b>		
3a. MOS (\$)	=(milk market price per liter - BEP of milk price per liter)	
	' .....	' .....
3b. MOS (%)	=(Milk Market price per liter - BEP of milk price per liter )/Milk market price per liter x (100%)	
	.....	' .....

Table 4 continue.....

Explanation	Calculation	Results
<b>III. Total milk production (Y)</b>		
1. The planning of total milk production	' .....	' .....
<b>2. BEP of total milk production</b>	= TC/milk price per liter	
	' .....	.....
<b>3. Margin of Safety</b>		
3a. MOS (\$)	=(The planning of total milk production - BEP of total milk production)	
	.....	' .....
3b. MOS (%)	=(Jumlah produksi susu yang direncanakan- Jumlah produksi susu BEP)/ Jumlah produksi susu yang direncanakan x (100%)	
	.....	' .....

**GOOD LUCK!!!**