

Project IV

LIVESTOCK PRODUCTION ECONOMIC

Subject : **Livestock Production Economic Class S**
Venue : Monday, 19th March 2018
Type : Take Home
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The function of milk production (Y) with concentrate feed (X) is

$$= Y = 5 + 16X - X^2$$

❖ Milk price (Py) is \$7. And Concentrate feed (Px) : \$5

Question 1: Calculate

- 1a. How many unit input is needed to obtain Maximum Average Revenue (AR maximum)?
- 1b. How much \$ is Average Revenue (AR maksimum)?

- 2a. How many unit input is required to achieve Maximum Total Revenue (TR maximum)?
- 2b. How much \$ is Total Revenue (TR maximum)?

- 3a. How many total concentrate feed are provided to get Maximum Profit?
- 3b. How much dollar (\$) is Maximum Profit if using concentrate feed only ?

Question 4:

- 4a. If the other variable cost: \$ 0.75, and Fixed Cost = \$0.58, count Profit maximum with considering all of input costs!!

Question 4b: Fill Table 1. Below:.

Table 1. Revenue and Profit with the variation of concentrate feed quantity

X	Y	APP	MPP	P_x	P_y	TR	TC	MR	MC	Profit
(Input)	(Output)	=Y / X	=dY/dX	= Input Price	= Output Price	=Y x P _y	=P _x x X	= TR'	= TC'	=TR -TC
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

Question 5:

5a. How much \$ is Profit maximum?

5b. How many input should be provided to and output yielded to meet these maximum profit?

GOOD LUCK !!!