

SENIOR TEAM PROBLEM

TEAM NAME: _____ TEAM MEMBERS: _____

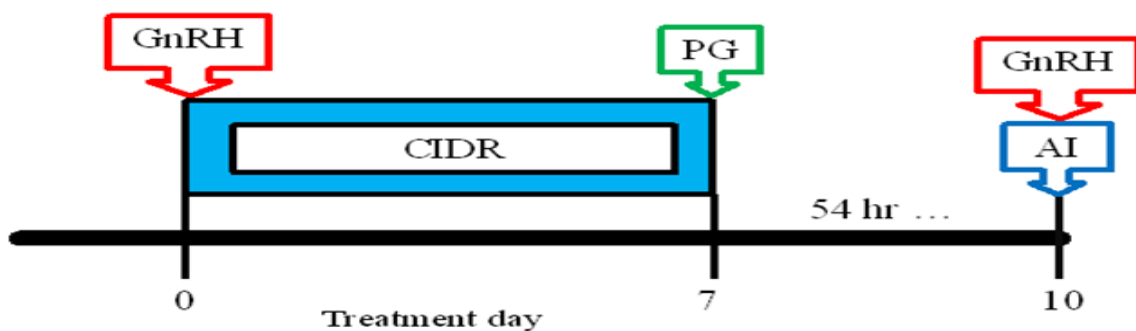
You own 100 head of replacement heifers that you intend to synchronize and AI breed the heifers one time before turning out 2, 15-month old bulls that will breed the heifers that did not conceive to our AI breeding. Your local Select Sires semen salesman has recommended that you use the CO-Synch + CIDR for your estrus synchronization program. Below is the cost of items that will be need for the CO-Synch program and the cost of your 2 new bulls that your purchased from the BCIA test station.

Item	Cost per Bottle or Package	Doses per Bottle or Package
OvaCyst (GnRH)	\$ 44.40	20
Lutalyse (PG)	\$ 57.40	20
CIDR	\$ 108.00	10
Item	Cost per Heifer	
AI Technician Cost	\$ 13.50	
Semen Cost	\$ 18.00	
Cost of Preg Check per Cow	\$ 5.75	
Bull Purchases	Amount	
Bull # 1	\$ 4,200	
Bull # 2	\$ 3,800	

Estrus Synchronization Program that you will utilize to breed the heifers:

CO-Synch + CIDR

Perform TAI at 54 hr after PG with GnRH at TAI



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1. What is the total cost of completing the estrus synchronization program and artificial insemination, on a per-heifer basis? (Round to the nearest cent)
2. If 60% of the heifers have conceived to our AI breeding and 10% of the heifers are open at preg check, how many heifers did your herd bulls breed? (Round to the nearest whole number)
3. If the bulls are utilized for 4 years before being sold for a salvage value of \$1700 each, what is the cost, per year; of the bulls you purchased (not including feed cost)?
4. Assuming that you will be using the herd bulls for 4 years, what is your cost per heifer that is bred naturally this year? (Round to the nearest cent)
5. What are the total breeding costs for 2014? (Round to the nearest cent)
6. How much are your breeding costs on a per heifer basis (including those that were AI bred, bull bred and those that did not breed)? (Round to the nearest cent)

Utilize the following information for the questions below:

Feed Cost of Heifers from Weaning to Preg Check: \$20000

Feed Cost of Heifers from Preg Check to Calving: \$18000

7. What is the feed cost, on a per head basis, for the heifers that are confirmed pregnant and fed from weaning to calving? (Round to the nearest cent)
8. What is the feed cost, on a per head basis, of the heifers that are sold as open heifers right after the preg check? (Round to the nearest cent)
9. Assuming the cow costs associated with the dam of the replacement heifers are \$600, how much do the open heifers need to bring to breakeven if they are sold right after being pregnancy checked? (Round to the nearest cent)
10. Assuming the cow costs associated with the dam of the replacement heifers are \$600, what is the breakeven price for each calf sold at weaning, assuming a 2% death loss in the calves that are born (remember only 90% of the cows actually bred; the others were sold at cull cow price and should not be included in this calculation)? (Round to the nearest cent)