

Team Name: _____ Team KEY

EXAMPLE Team Problem 25 Points

You are a cattle producer in the Shenandoah Valley of Virginia and run 250 stocker calves annually, split evenly – 125 head of steers and 125 head of heifers.

After five months of backgrounding, you keep the top 15% of the heifers as replacements, and market the remaining calves as mid eight weights to a western Kansas feedlot. These cattle are in your possession and care from August 15 – September 15th. They average 620 pounds at the beginning of the grazing period.

As you prepare to work your calves for turn-out, you are comparing Ivomec Plus® Injectable and Long Range® Injectable for your deworming needs.

Use the above information and the provided product labels to answer each of the following questions.

1. Both Ivomec Plus® and Long Range® are members of the following class of antiparasitics: (2 pts)
 - a. Antioxidants
 - b. Cooperia Punctata
 - c. Eprinomectin
 - d. Macrocyclic Lactones
2. Your neighbor has a grazing dairy and raises veal calves, which of these products can she safely use on the veal calves? (2 pts)

Neither Product is Labeled for Use in Veal Calves

3. Which product protects against re-infestation of a greater number of parasites for a longer period of time? (3 pts)

Long Range

4. If you treat your weaned calf group with Long Range today, what is the soonest you could market those calves to an unknown destination or harvest facility? (3 pts)

a. May 10th b. June 4th c. June 6th d. September 15th

5. All of the following indications are true for both Ivomec Plus® and Long Range®, in the 500 ml size, EXCEPT: (2 pts)
 - a. Safe for use in weaned calves over the age of 3 months
 - b. Treats both Gastrointestinal and External Parasites
 - c. Can be administered with syringes constructed of any material
 - d. Is to only be administered subcutaneously

6. The average weight of each calf is 620 pounds. How many total milliliters would you need of each product to treat the entire group one time? Round up your individual dosage to a full milliliter. (3 pts)

1500 ml or cc of Long Range
1500 ml or cc of Ivomec Plus

$620/110 = 5.6 = 6 \text{ ml} \times 250 \text{ head} = 1500 \text{ ml}$
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7. Ivomec Plus® retails for \$237.00/500 ml bottle and Long Range® retails for \$696.00/500 ml bottle. Calculate the cost/head for initial treatment with each of the products. Round your dosage to a full milliliter. Round your final answer to two decimal places. (4 pts)

Ivomec Plus $\$237/500 = \$0.474/\text{ml} \times 6 \text{ ml} = \$2.84/\text{hd for the initial dose}$

Long Range $\$696/500 = \$1.392/\text{ml} \times 6 \text{ ml} = \$8.35/\text{hd for the initial dose}$

8. Your herd has a history of recurring infestation with Cooperia Punctata. How many treatments with each product will you need to administer during the 150-day time period your calves are on grass? (3 pts)

- a. 1 treatment using Ivomec Plus® and 1 treatment Using Long Range®
- b. 2 treatments using Ivomec Plus® and 1 treatment Using Long Range®
- c. 7 treatments using Ivomec Plus® and 1 treatment Using Long Range®
- d. 7 treatments using Ivomec Plus® and 2 treatments Using Long Range®

9. To maximize the effectiveness and efficiency, gaining maximum control of the full scope of parasite protection, which product provides the most protection for the least cost? (3 pts)

- a. Ivomec Plus®
- b. Long Range®
- c. Both Products will cost the same
- d. We don't have enough information to determine

620 lbs 1.5 lbs day grazing 230 days grazing = 965 pounds

Ivomec Plus avg cost/treatment for 8 Treatments (every 28 days) $2.84 + 4.27 = \$3.56/\text{trtmnt}$
 $\$3.56 \times 9 \text{ Treatments} = \32.04

Long Range avg cost/treatment for 2 Treatments (at day 151) $\$8.35 + \$11.14 = \$9.75/\text{trtmnt}$
 $\$9.75 \times 2 \text{ Treatments} = \19.50

Long Range provides the most protection for the least cost