Vet's Corner: Evaluation of cost effective treatment of calf pneumonia

Despite advances in ventilation, nutrition, and vaccination, treatment of calf pneumonia remains a concern for the herd health veterinarian. By mid winter, we have seen enough cases to have a clinical impression of which antibacterials are resolving cases best for this season and our area. A common strategy is to record temps and clinical scores on all calves at the beginning of the outbreak. Then three or four antibacterials are selected and used individually on calves for 48 hours. Temps and attitude are recorded again, and treatment continues on all calves with the antibacterial which reduced fever and improved respiratory rate most successfully.

During the choice of antibacterials, the cost of the medicine is always evaluated and it is not as simple as choosing the least expensive bottle. Sometimes a more expensive bottle can be less expensive to use because of reduced dose size and longer duration of action which also cuts labor cost. The following table attempts to show that it is not as simple as choosing the cheapest bottle.

Cost of total treatment			Cost of the bottle
$1.24	Med A	4.5ml/100 lb SQ every other day for three days	2. ($46.00/btl)
$2.40	Med B	1.5ml/100 lb once	7. ($160.05/btl)
$3.68	Med C	2ml/100 lb IM once a day for 5 days	1. ($36.84/btl)
$3.97	Med D	1.1ml/100 lb SQ once	8. ($360.63/btl)
$4.28	Med E	1.5ml/100 lb SQ every third day for 2 shots	6. ($142.75/btl)
$6.27	Med F	6ml/100 lb SQ every other day for two shots	5. ($130.65/btl)
$6.57	Med G	2ml/100 lb SQ once a day for 5 days	3. ($65.71/btl)
$12.22	Med H	5.5ml/100 lb every third day for 2 shots	4. ($110.10/btl)

Of course, the most cost effective treatment is the one that quickly cures the calf and

results in the least amount of permanent lung damage, but when selecting antibacterials to compare, these cost differences come into play. The least expensive bottle Med C did not have the lowest cost of treatment because it requires daily treatment, and the most expensive bottle Med D had a similar cost to the least expensive bottle because it is only used once. Med G was expensive because of repeated daily treatments and Med H was most expensive because of the higher volume of medicine needed per treatment.

In closing, the point of this discussion is not to start a big guessing game about the identity of the meds and their prices. The examples listed are for 100 to 500 ml bottles and there have been significant price raises in six of these products since fall, so don't assume that these prices are currently accurate.

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